

THE

Desert

M A G A Z I N E



OCTOBER, 1938

25 CENTS

The DESERT INN

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OCTOBER 15th



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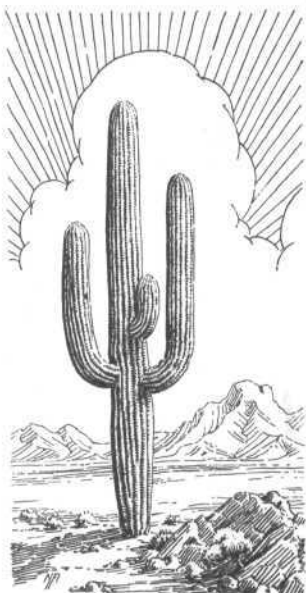
no. **12**

This is the twelfth edition
of the monthly Desert
Magazine, completing our
first year of publication.

To the good friends who sub-
scribed to the new desert journal
beginning with the first number,
this is a friendly reminder that
it is now time to renew sub-
scriptions.

To other thousands who have
found the Desert Magazine fills
a long-empty place in their lives,
we have back copies to complete
your first year's file.

To all who seek information
about the Southwest Desert:
see the complete Vol 1 in-
dex in the last pages of this
edition.



THE *Desert*
MAGAZINE

PUBLISHED AT EL CENTRO, CALIF.



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CREED OF THE DESERT

By JUNE LE MERT PAXTON

Beyond the range called Calico
Lie secrets the world will never
know;
Secrets the hills withhold from
view,
Secrets the rocks don't tell to you.

DESERT

Calendar

Civic groups in the desert area are invited to use this column for announcing fairs, rodeos, conventions and other events which have more than local interest. Copy must reach the Desert Magazine by the 5th of the month preceding publication. There is no charge for these announcements.

SEPT. 29-30 — Bi-State fair at Clovis, New Mexico.

SEPT. 30—St. Jerome's Day. San Geronimo festival at Taos, New Mexico.

SEPT. 30 to OCT. 2 — Annual rodeo at Tularosa, New Mexico.

OCT. 1-30—Open deer season in Nevada in all counties except Washoe.

OCT. 1—Heard museum at Phoenix to reopen for the season.

OCT. 6-9 — Santa Cruz, Arizona, county fair and rodeo.

OCT. 7-8—Alfalfa Festival at Lancaster, California. Tom Foley, chairman.

OCT. 9-16—New Mexico state fair at Albuquerque.

OCT. 14-16—Fifth annual Non-professional rodeo at Victorville, California.

OCT. 15—Forty-five-day dove hunting season in California ends.

OCT. 15 to NOV. 28—Duck hunting season in California and Nevada.

OCT. 24-27 — American Mining congress at Ambassador hotel, Los Angeles.

OCT. 25 — Dedication of monument at spot where first airplane landed at Yuma, Arizona.

OCT. 26 to NOV. 13—Tentative dates for non-commercial photographers' contest at Museum of Northern Arizona, Flagstaff.

OCT. 29-30—Second annual Mojave Gold Rush at Mojave, California.



Vol.1

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RANDALL HENDERSON, Editor
TAZEWELL H. LAMB, Associate Editor
J. WILSON McKENNEY, Business Manager

Manuscripts and photographs submitted must be accompanied by full return postage. The Desert Magazine assumes no responsibility for damage or loss of manuscripts or photographs although due care will be exercised for their safety. Subscribers should send notice of change of address to the circulation department by the fifth of the month preceding issue.

San Bernardino, California.

Dear Desert Magazine:

I am so delighted to have you send me the lovely file for my first volume of my Desert Magazine and wish to thank you very much.

During the week-end there were 30 visitors to the Baldy Mesa game farm; each one in turn looking over my magazines. I no longer have to hold my breath while they look at them. They are so safe in their nice cover.

I shall always try to get my friends to subscribe for the magazine, for the pleasure it will give them, as well as for the benefit of the magazine. I was pleased with a remark I overheard yesterday: "This magazine is going to be in a class with the Geographic; and is the only one of its kind I have ever seen."

ETHEL CAUGHLIN.

Mojave, California

Dear Mr. Editor:

I been readin' your magazine ever since you started it. I think it's a good paper and I've been proud of you up to now, but when I read about your "HOT AIR CONTEST" I was plumb disgusted. It's goin' to make a lot of people lie about the weather and give the desert country a bad name. You can mark my word, they's goin' to be somebody from Death Valley write in and say they seen it a hundred and thirty-four in the shade and no shade. Then you'll get another letter from Phoenix or Needles or someplace about fryin' eggs on the sidewalk.

There ain't nothin' lower than a weather liar in my estimation so I'm goin' to tell you about August 2, 1884, the hottest day Mojave ever seen just so you'll have a record of the truth.

When the sun come up that day, the thermometer rose right with it. Of course, we ain't got no official record of how hot it got because the quicksilver blowed the top of the thermometer off and run out on the floor. But I'll say this, by eleven o'clock in the mornin' all the electric-light globes in town was melted and hangin' down like icicles. That was indoors. Outside it was hotter. I seen with my own eyes a collie dog run across the street and get the hair singed right off him. At one o'clock a man walked out in the sun with his shirt tore. Before he could get back in the shade again his hide was smokin' like he'd been branded. That was Danny O'Brian. He's still got the scar on him yet. At two o'clock the water in the horsetrough was boilin'. I couldn't believe it when I seen it so I throwed in two eggs and you can believe me when I say we et hard boiled eggs for supper. At three o'clock it was hotter still. This is what I done and it's the gospel truth. I held a piece of newspaper in the sun and in ten seconds, by my watch, it caught fire and I lit my pipe

LETTERS

with it. From then on it began to cool off but the water in the horsetrough didn't stop boilin' 'till four o'clock the next mornin'.

ED. ROCKWELL.

San Jose, California

Dear Sir:-

During the Spring vacation trip of the Southern California Chapter of the Sierra Club under the leadership of Mr. W. A. VanDegrift, we visited southern Arizona, and on our return through El Centro, we were advised by our leader to stop at the office of the Desert Magazine.

I took that opportunity of subscribing to your magazine beginning with the first issue, and to date I have been more than pleased with the contents.

Four years ago I made my first trip into Death Valley, repeating the trip two years later. The trip into Arizona opened a new area and it is my hope to visit other sections of the southwest in the future.

I find the Desert Magazine a delightful means of getting acquainted with various sections of the desert country and their traditions.

Please continue my subscription.

FRANK H. LEWIS.

Yuma, Arizona

Dear Editor:

Merely for information, and not to start an argument, will you please give me the authority for your spelling of the word *malapai* in your September number. I know the old desert rats pronounce it that way, but I cannot find such a word in the dictionary.

ED. HAINES.

You are right. It isn't in the dictionary that way. Webster gives the word malpais, a compound of the two Spanish words mal meaning bad or rough, and pais meaning country. In actual usage among desert people, however, the name is applied to the mesas and benches covered with small volcanic rock. These mesa areas often are as smooth as if a steam roller had passed over them, crushing the rock into the sand and gravel. Since Americans have changed the original application of the Spanish words, the actual pronunciation would seem to be a better guide for spelling than the original Spanish, which means something different. We are simply guided by the usage of the old-timers.—Editor.

Brentwood Heights, Calif.

Editor, Desert Magazine:

For some time I have wanted to write to you and congratulate as well as thank you for the fine magazine you publish. My reason for thanking you is because the Desert Magazine has opened up a new and pleasant pastime for me. I have followed Mr. Hilton's articles with such interest that I have set up a polishing outfit to work on some of the minerals I found by following his directions. Not only has your magazine introduced me to this fascinating hobby, but has introduced to me many wonderful places on the desert to visit as various vacations come up.

GRAHAM NELSON.

Bakersfield, California

Dear Mr. Henderson:

I wish to congratulate you for your beautiful tribute to Padre Garces in your editorial of the DESERT MAGAZINE and to pat Arthur Woodward on the back for his splendid human characterization of the great Padre of the desert.

As you probably know, Garces crossed the Kern river, on May 1, 1776 and named it the Rio de San Felipe. He is the first recorded white man on the Kern, and on his journey into the Valle de las Tulares (San Joaquin) he was endeavoring to find a shorter route from Sonora Mexico to Monterey. His guides refused to go on as the Indian tribes (Yokuts) in the valley were fighting and his supply of beads and tobacco used to gain the friendship of the Indians had given out, so he was forced to turn back after going as far north as White River in Tulare county. The journey was made especially dangerous because Spanish deserters had been "bad with the women," and the name Español was not held in favor.

On May 7th, on his way south Garces again crossed the Kern River, near the present site of Bakersfield and named the rancheria San Miguel de los Noches el Santo Principe, after one of the patrons of the expedition.

For that reason we are planning to erect a twenty-foot, twenty thousand dollar statue, on the north side of Bakersfield in Garces Circle. Mr. Woodward has furnished us with historical data on the field garb of the Franciscan and the model is considered by sculptors to be the finest in the State of California from the angle of artistic values. We hope to have the statue ready for dedication by May 7th, which will be the anniversary of the 163rd year since Padre Garces crossed the Kern River at Bakersfield. Mr. Palo-Kangas, well known Finnish sculptor is doing the work.

We extend a very cordial invitation to be present if possible.

Best wishes,

R. W. LOUDON.



White Sands of New Mexico

By N. J. STRUMQUIST
Deming, New Mexico

Awarded first prize in the August photograph contest of the Desert Magazine. Taken with a 4x5 Speed Graphic, Goerz Dogmar f4.5 lens, stop f22, 1/10 second at 6:30 p.m. Wratten 23A filter used. Panchro Press film.



Mammillaria Blossoms

By MARY BEAL
Daggett, California

This photo of the blossom of *Mammillaria tetancista* won second prize in the August photograph contest. It was taken with a Korona camera, panchromatic film, f22, 1/5 sec., K1 filter about noon.

White Mountain Smith

of the Petrified Forest

By ADRIAN HOWARD

"**T**HE stage in front of mine stopped. A masked man with a rifle stepped out from behind a tree and ordered, 'This is a holdup. Everybody unload and line up.' Passengers from all seven stages lined up and he ordered one of them to pass the sack and take up the collection. One fellow got cracked over the head for holding out and after that you should have seen the money and watches and rings fly into that sack!"

"Did he get your money, Uncle Charles?" Nine-year-old Bill was breathless with suspense.

"No, I pulled out my pocketbook and handed it to him, but he waved it aside and said, 'You keep your money, Driver, you have to work for it just like I do.'"

Bill's Uncle Charles was telling an early Yellowstone experience, and the small boy was lucky, for it is seldom one of the Old-Timers will reminisce. White Mountain Smith (Bill's Uncle Charles) can rarely be induced to travel the back trail from New Hampshire's White mountains, where he earned his nickname, down over Florida beach sands, through Yellowstone of the old days, across to Grand Canyon national park and into the land of stone trees, where he has been superintendent of the Petrified Forest for the past nine years.

He was christened Charles Jerod Smith when he opened his eyes in a conservative old Connecticut village a good many years ago. There it was the custom for

people to be born, grow up, join the church, marry a neighbor girl, raise a family, follow the same pursuits the father or grandfather did, die quietly in beds, and be buried in the family cemetery.

Young Charles looked over the cards and found something lacking in the deal. His elder brother had questioned that mode of life and slipped away to join the navy. From China he sent bright colored shawls and chests of fragrant tea to the mother. From England and Spain came books and gifts for the younger brother. There was even a small chattering monkey from Brazil that became the household pet, rather to the disquietude of that staid community!

When the time came for Charles to go he did not seek the sea. "I wanted to see

the far places in our own country," he explained later.

Visitors at Crawford Notch in the White mountains of New Hampshire found a reliable guide in the tall quiet young fellow who took them for trips to the lakes and through the pine forests. Winters found this same lad driving stage on the hard packed sands of Florida's Ormond Beach, and in his leisure time learning about the bitterness of wild oranges and the gentle friendliness of old-time Southern darkies.

Some of the visitors talked about Yellowstone. It sounded like the sort of place he wanted to see. And so, this Connecticut Yankee counted his money—and headed west.

There were no rangers in those days, but a troop of cavalry policed Yellow-



Contrary to popular supposition, White Mountain Smith did not derive his nickname from the White mountains of Arizona, but from a range in New Hampshire. He was born in New England, but came west as soon as he had saved enough money for the trip. He was one of the first rangers to wear the uniform of the national park service and has served at Yellowstone, Grand Canyon, and the Petrified Forest, where he is now superintendent. There are both comedy and pathos in the life of a park ranger—as you will glean from this story of one of the veterans in the service.

stone park, and government scouts policed the soldiers, who were inclined to get lost in the vast wilderness. and too, they sometimes forgot that soldiers were supposed to uphold the law, not break it. After White Mountain drove stagecoach for some time he found himself a commissioned government scout. But before he earned that distinction he had been over practically every road and trail in the park, and had been present at a few holdups, which were not infrequent before automobiles were permitted on park roads.

Government scouts had many of the duties of present day rangers. They patrolled the park boundaries on the lookout for poachers; helped any travelers who needed aid; looked after the herds of wild animals driven by snow from their mountain range down into the valleys; fought forest fires and did general police duty.

So the time passed until the national

park rangers were organized. White Mountain was one of the very first to wear the uniform of the national park service. There was little change in his duties. In the summer he gave information and directions to the ever increasing horde of tourists. In winter he patrolled on snow shoes and skis and looked for poachers. Once he found an elk quartered and hanging in a tree. For three below-zero days he laid in wait for the killer and when he appeared to get his meat, he found himself confronted by one of those infernal rangers! A hundred and fifty miles of snow lay between him and the seat of justice so he probably felt pretty safe. But at the ranger's cabin he found himself on one end of a telephone line and Judge Meldrum on the other. "Seventy-five dollars fine, and you'll be escorted out of the park by the ranger!"

Ranger Life Exciting

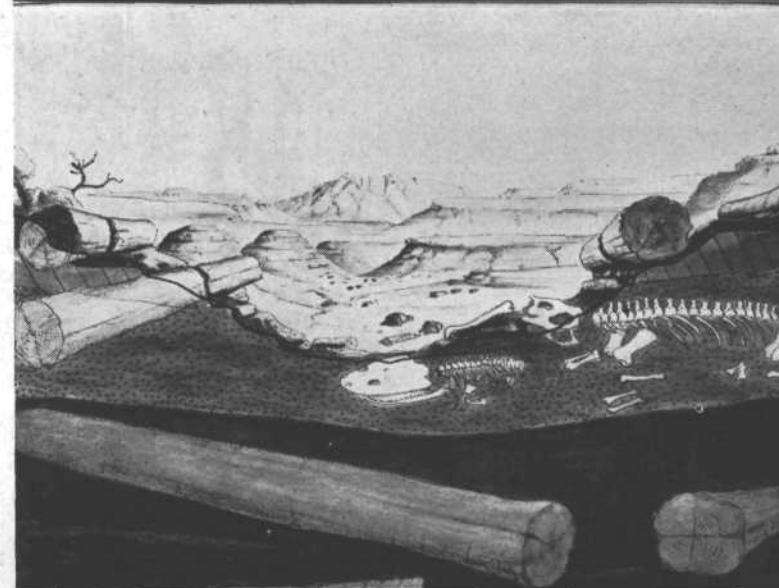
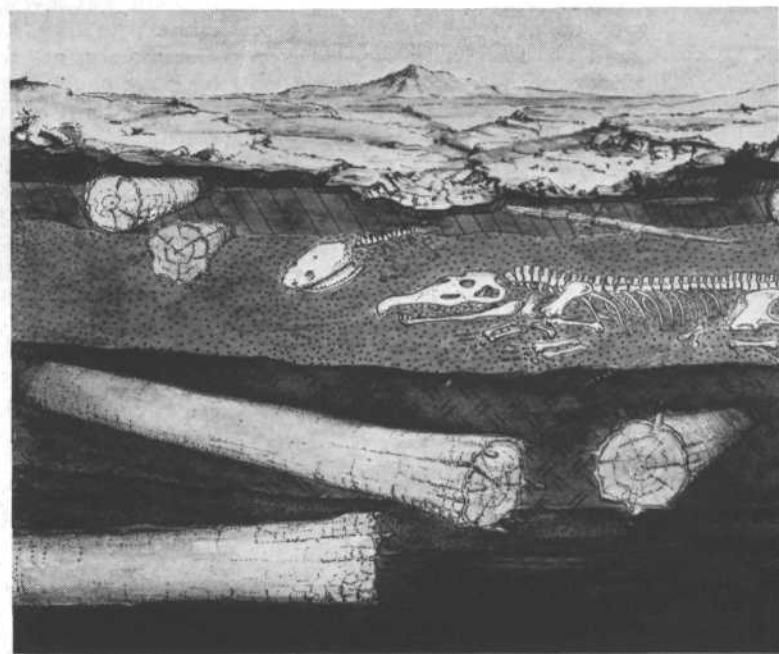
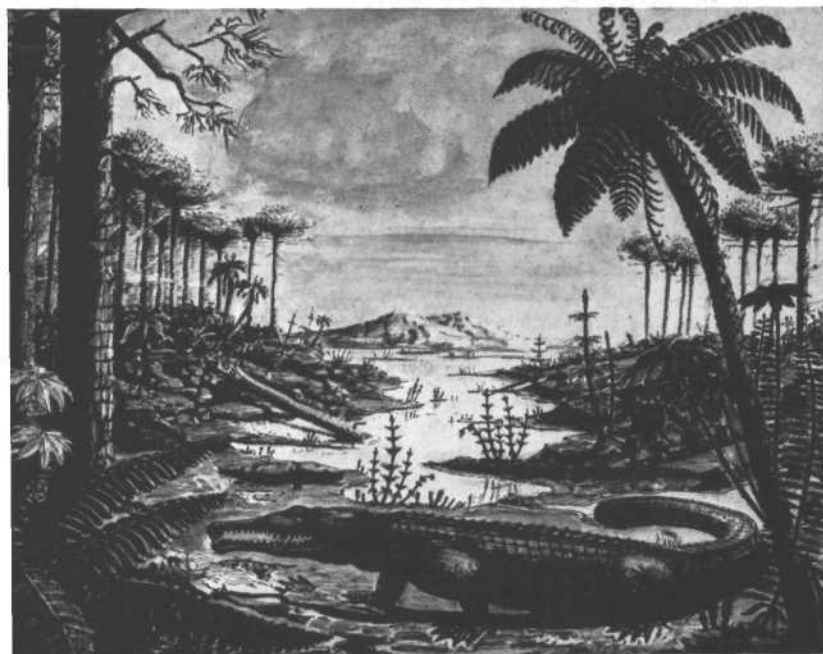
One was never bored by ranger life. Among the visitors were plenty of pretty

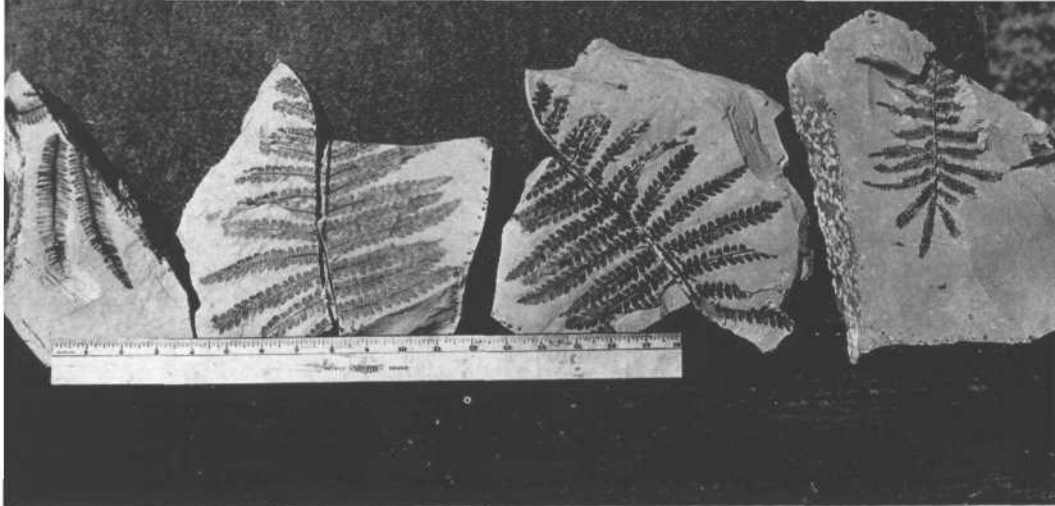
girls ready to dance in the evenings, and the hotels hired several young lady entertainers, if the rangers had time to be entertained. Mostly, however, in the summer time they were busy hunting lost dudes, or putting out forest fires kindled by careless campers, or escorting important personages into hard-to-reach fishing streams. More than once gruff old Emerson Hough dropped in and demanded the company of White Mountain on his fishing expeditions. Now and then it was necessary to rescue a tourist treed by a bear, or discourage a semi-tame elk bent on getting too personal with guests.

Sometimes there were disagreeable duties to perform, like shooting the poor grizzly that got a gallon can fastened on a paw, and it was so swollen and painful he became a menace. There was another incident connected with a bear. White Mountain would rather forget about it, but anyway a funny-faced little brown bear kept visiting the garbage barrel each

From lush tropical swamp to a desert forest of petrified wood. Here is a scientist's concept of four stages in the evolutionary process covering perhaps 150 to 180 million years.

(1) The original Forest (2) was gradually buried (3) then uplifted (4) and finally exposed by erosion as it is found today on the northern Arizona plateau.





Numerous fossils found in the Petrified Forest area have aided scientists in determining the evolutionary processes which have taken place here during a period covering millions of years.

night and making a general nuisance of himself. The garbage container belonged to White Mountain's cabin and he took the matter as a personal insult. Armed with a husky barrel stave he hid behind a tree. The moon went behind a cloud just as the bear shuffled along and buried his head in the barrel. The exposed rear end presented a perfect target and the avenger landed the stave on it with several soul-satisfying resounding whacks. Out of the barrel came an angry grizzly whose sense of humor was taking a vacation. White Mountain never has made public the official record he established in his sprint for safety!

Ranger cabins were 20 miles or so apart, and six months of each year in Yellowstone all patrols were made on skis or snowshoes. In the early fall, food supplies for the winter months were stored away in each cabin. Phonograph records guaranteed to teach shorthand in six lessons, love songs warbled by John McCormack or Ada Jones, depending on the individual taste of the ranger, were packed in. Plenty of reading matter, popcorn and hard candy to help pass long evenings were close at hand. White Mountain was all set for the winter of 1919 when he received an appointment as chief ranger at Grand Canyon national

park. He looked at his well worn snow shoes in the corner. Four days later he discarded them at the railroad station, without courtesy of farewell.

In 1920 Grand Canyon was not more than half civilized. Bright Angel Trail was more or less of an adventure. When one reached the river and desired to cross to the other side, he permitted himself to be lashed into a crude sort of chair and swung out over the sullen brown flood by means of cables. The first suspension bridge was built the spring White Mountain went there, and while most of the material could be taken down on pack mules it was necessary to carry the long cables with man force. White Mountain was in charge of that job and duly carried his share of the load.

Those years were busy ones, passing swiftly. When a director of national parks was asked about the spare time of rangers, there was little sarcasm in his answer: "After the tourists have been directed to hotels or camps and out of the way for the night, then the rangers look after the water supply, see that the electric lights are working, that wild animals are not being molested or molesting anybody. They check up on the telephone and telegraph lines. They round up any vandals found carving their initials alongside

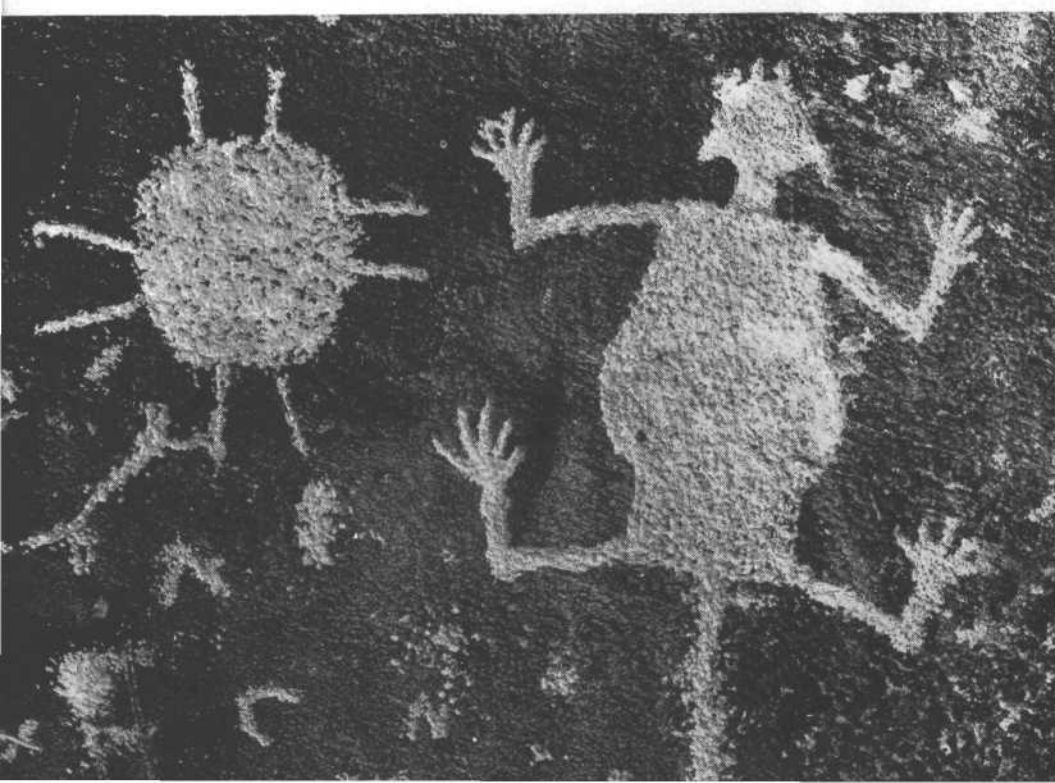
thousand-year-old pictographs. If a surprise shipment of fish has arrived it is planted in the nearest lake or river, if any. And then if no venturesome dudes are lost on mountain or trail they sweep and dust the museum ready to open at daybreak the next morning, and then their time is all their own!"

That list of duties only halfway covers the accomplishments of the "Old-Timers" of which White Mountain is a charter member. Before the day of the specialist, such as historian, geologist or naturalist, every ranger was a sort of folding combination of all those things. He also had to have a working knowledge of woodcraft, camping, cooking, and horsemanship. He must be able to set a broken leg, or build a coffin, should death overtake some unfortunate far from headquarters. All of these things White Mountain Smith can do and has done. And his knowledge came in handy when he was sent as superintendent to the Petrified Forest national monument 200 miles southeast of the Grand Canyon.

Tourists who acclaim the beautiful museum they see today should have seen thousands of dollars worth of valuable specimens housed in a shack that must have cost close to \$200.00. They drink deeply at the fountains provided at each checking station, and have no knowledge of the days when one small spring hidden away under a cliff furnished all the available water for the Forest. And it was eight miles from the houses! They roll swiftly over miles of smooth pavement and know nothing of the hundreds of cars that have been stuck in blow sand, or marooned by seasonal floods, before bridges were built and roads paved.

One does not say that White Mountain singlehanded has wrought all the changes that are seen today, but under his guidance hundreds of thousands of interested people have traveled through the Forest and have turned the spotlight of public interest on this Arizona beauty spot. Senators, who have the power to bestow or withhold funds, have visited the place and returned with their friends. The great Einstein stopped for a hour and remained for a day, leaving the famous Theory to shift for itself while its father asked childlike questions about everything he saw. When he returned to Germany he

"Newspaper Rock" bearing the symbols of a prehistoric Indian race is one of the interesting features of the Petrified Forest monument.



wrote a letter saying the petrified wood was the most interesting thing he saw in America, and he inclosed an autographed photograph of himself for White Mountain.

Years of protecting wild creatures in Yellowstone gave White Mountain a love for all helpless animals. Forty square miles of the Forest were fenced off for exclusive use of the native antelope. Water was provided by specially constructed tanks, and close to the road which runs through their refuge placid mothers and their dainty kids feed and play, having no fear of the swarms of tourists passing by. Rabbits and birds are fed in the superintendent's patio when snow is deep, and every live thing is protected. Old Pancho, a battlescarred bull snake, slides serenely over petrified logs at headquarters knowing that since he harms nothing, he will not be harmed.

A park superintendent must be prepared for all emergencies and White Mountain is no exception. "You are elected president of our Rotary Club," and White Mountain serves his term.

From a great mission school a hundred miles distant comes this plea: "Our students would like to have you talk to them!" For two hours he keeps the interest of Indians packed like sardines in the big hall.

Takes to Pulpit

"Will you take charge of the services for me this Sunday? I have to leave town." White Mountain stands in the pulpit and talks to his fellow townsmen about "Famous Prayers." And, it is said, he plays a wicked hand at poker.

"Come to Hollywood and appear on Cecil de Mille's national radio hour. We are broadcasting 'Petrified Forest' and want you present." With the famous director asking dozens of questions about the real Forest, White Mountain forgets his studio audience of a thousand, and the millions of unseen listeners, and has a real nice visit with Mr. de Mille. Tourists, checking into the Petrified Forest, tell rangers they heard the radio talk and it brought them to Arizona.

Once when a trail foreman was killed in the depths of Grand Canyon, and it was not possible to bring his body out, White Mountain stood beside the open grave and recited the Service for the Dead. Those things are all in the day's work of a park superintendent. Along with those more serious tasks, day after day, come the little irritating things. Not long ago a cartoonist gave his version of "An Hour With Superintendent Smith."

An irate cowman appears in the office. "Your engineer made me remove my fence off the Forest. Your antelope and my cows is all mixed up. What you gonna do?" And then the CWA clerk edges in

with a worried look. "Here's 14 names I forgot to put on the payroll and I forget how I come to forget!" From the well driller's camp a battered driller, "Yes, the well's full of water, but it's salt, and we have to pull the casing and we can't because the cable is busted and we are out of gasoline and our chief driller has mumps!" What else can happen? The last visitor wears an ingratiating smile.

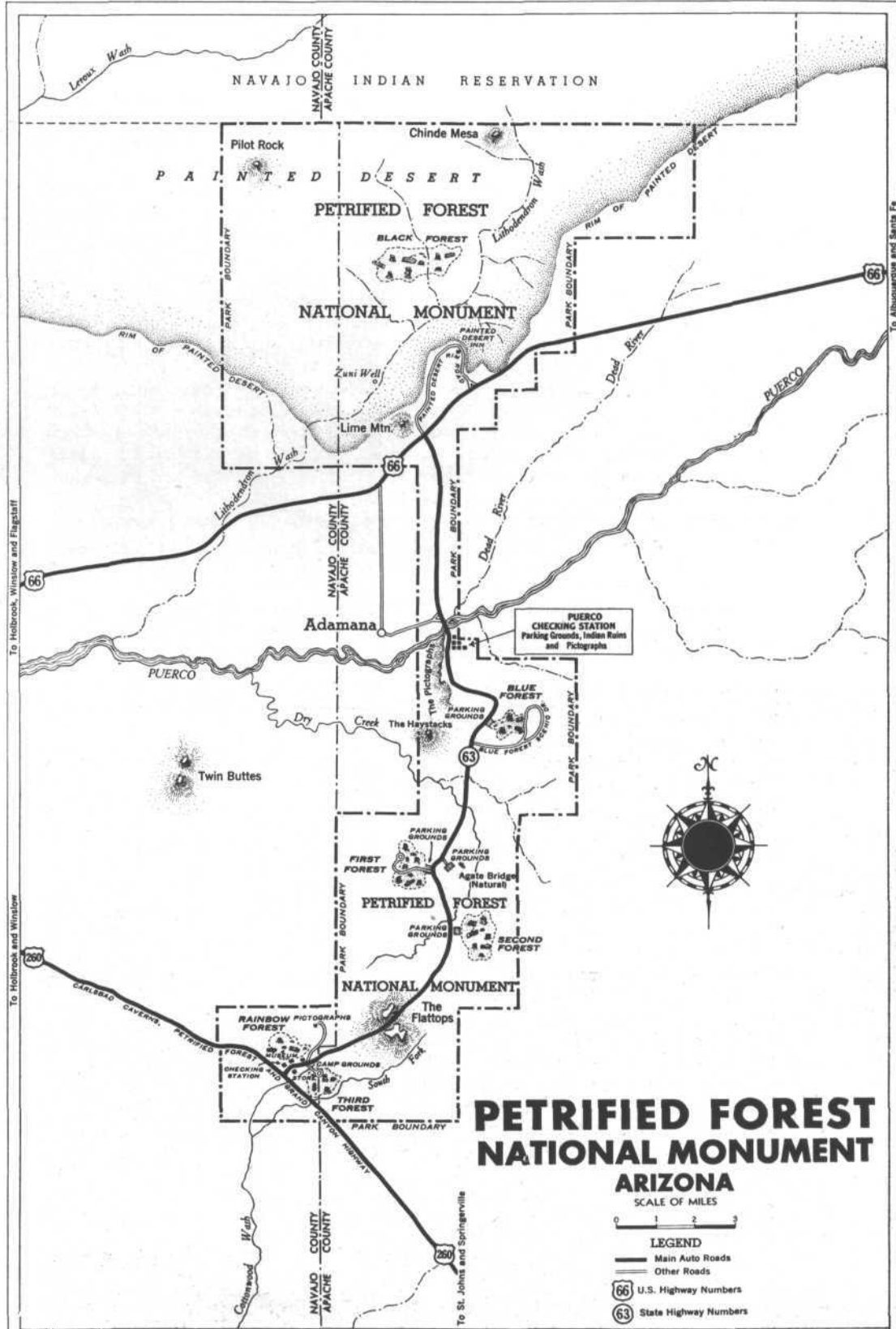
"What do you want, Perfecto?"

"I like you hire my truck and my nephew and me so we work for you. And you lend me seven dollar to buy tire for the truck, all right, no?"

With a letter in hand, a ranger leans over the desk in a confidential manner. "Senator So-and-which's chauffeur is here. The Senator wants you to escort his man over the Monument and let him pick out whatever wood he wants. Why, Mr. Smith, where are you going?"

"Away from here, to the farthest place I can find!"

That's the cartoonist's version, but I've never yet known one of the Old-Timers to be stampeded, and to my way of thinking, the Dean of all Old-Timers is WHITE MOUNTAIN SMITH.



John Daggett and his associates long ago took most of the silver out of the Calico hills. But the bright-hued rocks which gave this rugged area its name are still there, and the precipitous walls of Odessa canyon form a secluded desert sanctuary for those who would escape for a few hours from the hurly-burly which man chooses to call civilization. The accompanying picture was taken by Glen Edgerton in the Odessa canyon "Narrows."

Odessa Canyon in the Calicos

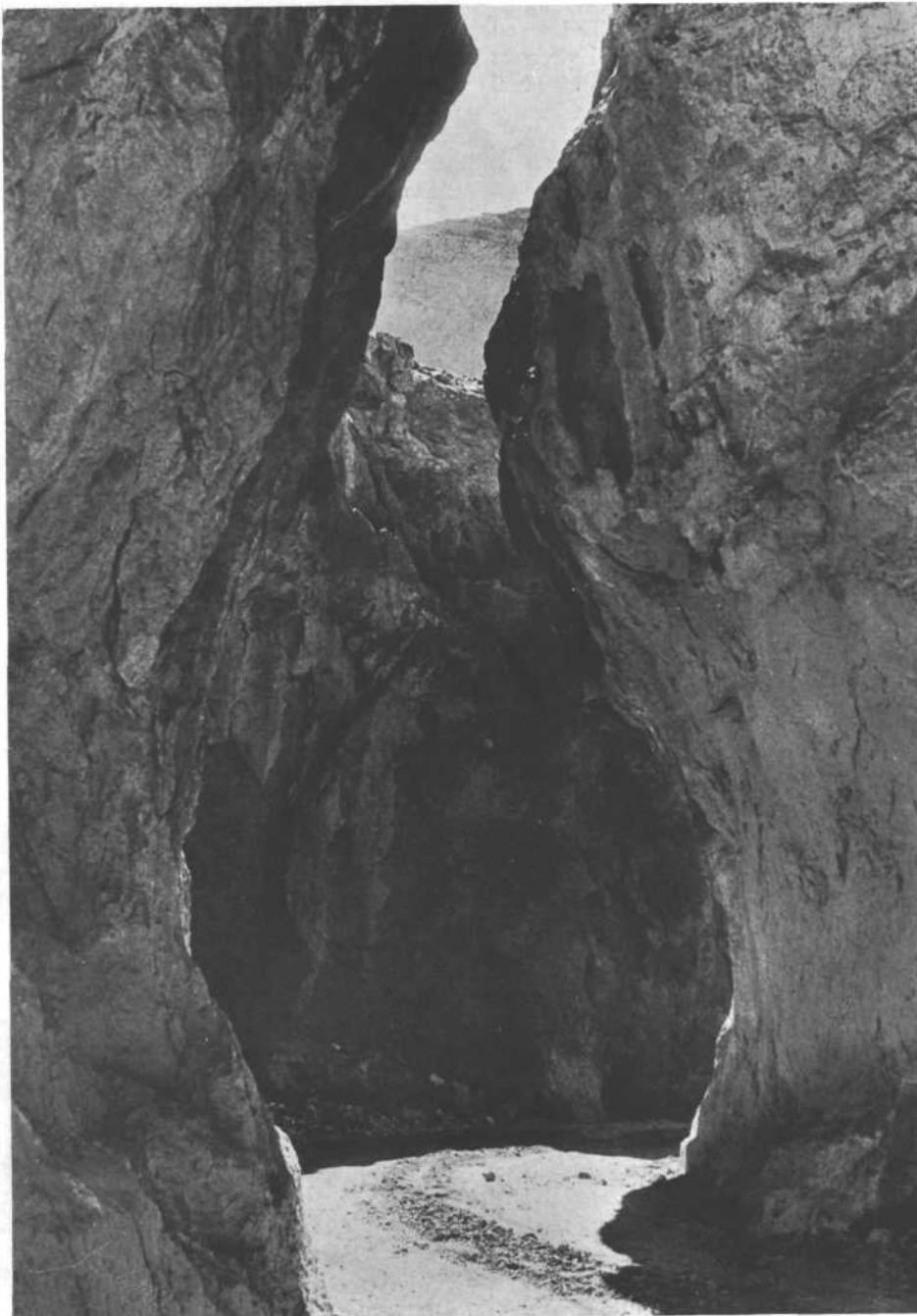
By CORA L. KEAGLE

"*W*E paid ten thousand for the mine but Nature threw in a million dollars worth of silver," enthused John Daggett to his mining partner, W. W. Stow, one afternoon back in the 80s, as they stood at the entrance stoep to the Odessa mine high up on the west wall of volcanic Odessa canyon on the Mojave desert.

Stow had most of the money in the partnership. Daggett was younger, a silver tongued lawyer of flashing personality. Their Odessa venture cleaned up millions and sent Daggett into politics. He became lieutenant-governor of California.

The two men sat until twilight, watching the shadows creep over the riotous colors in the mineral stained east wall of the canyon as the flaming desert sunset faded behind the hills. They saw de Salier, the mine superintendent, on his white horse, picking his way down the rock tumbled path until he disappeared at an abrupt turn in the canyon's course.

"The next move is to get an ore road



built out there to the new railroad," and Daggett pointed to the south where the terminus of the road he planned was later named "Daggett" and became the shipping point for the millions in silver ore taken from Odessa in the next ten years. It was this road planned by Daggett more than 50 years ago, and built with the help of "Uncle Billy" Raymond and other mine owners, that opened to the public the unique beauty of Odessa canyon. But today motorists speeding along the level stretches of highway east of Barstow, California, often pass, unaware, this nearby wonderland hidden in the heart of the Calico hills.

Early miners to whom the word Calico symbolized beauty and the missing element of feminine companionship, first

gave this name to the color splotted hills.

A modest road sign on Highway 91 indicates a dirt road leading across the dry bed of Calico lake. It looks flat and uninteresting but if you follow your nose for three miles or so you will find yourself rather suddenly at the awe inspiring entrance to Odessa canyon.

The towering walls of tumbled, multi-colored rock enclose a canyon so narrow in places that every turn seems the end of the road that threads its way along the bottom. While the road is fairly level the short, sharp turns make the speed caution signs amusing.

Originally a mere crack in the lava hills, the canyon has gradually been widened by the erosion of water and by the

blasting of miners during the ore producing era at the turn of the century.

Chaotic upheaval created Odessa canyon. In places it seems the work of an angry god who wreaked his vengeance on the hills and then hurled pots of pigment against them.

Whether the traveler be nature lover, miner, geologist or historian, the canyon speaks his language.

To the geologist a story is clearly revealed that includes a period under the sea, a rainy, semi-tropical age when the three-toed horse pranced in the clay along the shores of fresh water lakes, then a series of convulsions, upheavals and volcanoes which formed these strangely contorted mountain ranges. Clay strata have been burned to clinker hardness and stained with iron. In places the stratified layers of brown and cream are turned on edge like a tipsy layer cake. There are formations of tuff, breccia, intrusive andesite and rhyolite.

The collector will be lured by this "Jewel Box of the World" where he may still pick up specimens of opal, malachite, jasper and turquoise. Borax-bearing beds of the ancient seas have been tipped on edge. Half way through the canyon are to be seen the crumbling remains of the

great scaffolding which once supported the chute from Daggett's mine, down which tumbled the rich ore. The mine stope may be reached by a narrow trail where the splendid view is ample reward for the half-mile climb.

The historian will find in the vicinity a wealth of material, beginning with the days when, for 50 years, miners passed from Santa Fe to Los Angeles along the foot of the canyon, uninterested, deeming it folly to look for precious metal in volcanic rock. He will want to visit the "ghost" mining settlements near by, sites once humming with activity.

This region furnished much of the background for the volume, "The Desert," by J. C. Van Dyke, author and art critic. His nephew, Judge Dix Van Dyke, who has spent years in the district says its history may be likened to a tattered old book from which many pages are missing and parts of others more or less torn, blurred and indecipherable.

Today the mineral fortune of Odessa canyon and the Calicos is gone, or nearly so. But for those who seek the less tangible values of precipitous canyon walls and the coloring of a rugged desert landscape there will always be wealth in the Calico hills.

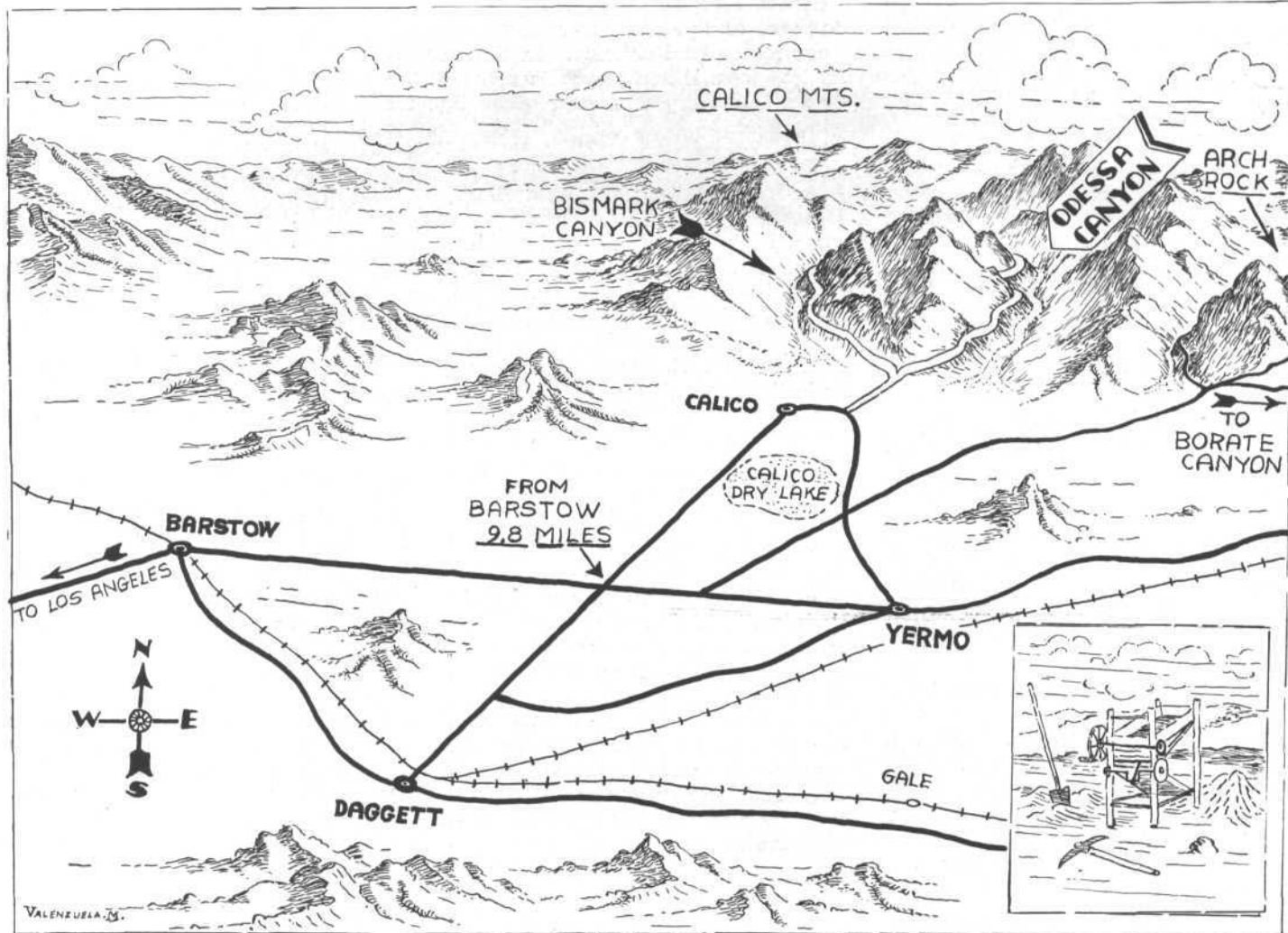
ENGINEERS STUDY PLANS FOR FIVE-ACRE-TRACT LAW

Accompanied by representatives of the General Land office at Washington, D.C., A. C. Horton, district engineer, spent the last week in August making a survey of the desert Southwest preparatory to the issuance of regulations governing the sale and lease of public land under the new five-acre-tract law passed by the last congress.

The Land office group spent two days along the desert sector of the Metropolitan aqueduct considering the feasibility of making lands adjacent to the big conduit available for five-acre homesteaders.

Members of the committee declined to make any public statement, asserting they were in the Southwest merely for the purpose of gathering information. Their report will be made direct to Commissioner Johnson of the General Land office. It was intimated that some time may elapse before full details of the new land program are made public.

The act authorizes the Secretary of Interior to sell or lease to any citizen 21 years of age five acres of vacant unreserved public land as a home, cabin, camp, health, convalescent, recreational or business site.





"Rock That Looks Like Ice"

By JOHN W. HILTON

Quartz crystals are found in many places on the desert. Prospectors do not attach much value to them, and yet they have a widespread use in commerce and science. In the accompanying text John Hilton suggests some of the markets for these crystals, and gives tips for identifying them.

THE room was gloomy and mysterious, furnished with weird oriental decorations and filled with the odor of incense. The single small light hung directly over a tiny table and reflected from the radiant surface of a crystal ball. "I see here in the crystal - - -" droned the voice of the fortune teller, and the light flashed fitfully from the beads around the neck of her customer as she stirred nervously.

"Foolishness" you may say, and perhaps with good reason; yet every year thousands upon thousands of dollars are spent by people for the privilege of hearing what some other person professes to see in a ball of crystal. This is by no means a fad of the moment but dates almost as far as does the fortune telling itself. Thousands of these crystal balls are being manufactured yearly as are great quantities of crystal beads such as the fortune teller's customer was wearing.

You might ask what have such things to do with the desert?

A great deal, in fact. For, although both the wearer and the gazer may believe that the crystals came from the orient they are more likely to have originated in the desert sections of Nevada, California or Arizona. Japan still produces a few crystals of quartz but by far the largest part used in the manufacture

of beads and balls comes from Brazil, Madagascar, or the United States.

If you buy a genuine crystal necklace at your local jewelry or department store it may bear the label made in Japan, Czechoslovakia, Germany or China, but your own desert community may have produced the material. There are few counties in the desert that do not have some point known as Crystal butte, Crystal hill or Crystal peak. The majority of these derive their names from the presence of quartz crystal in one form or other.

In buying articles made of crystal your attention is usually called to how cold the crystal feels to the skin.

"Just hold it against your cheek," the saleslady will say. "Feel how cold it is. That proves it is real crystal." It is a fact that quartz crystal has the ability to remain cool longer than most substances. To an expert there is a "feel" about crystal that identifies it, but it is unlikely that either the average sales girl or customer could tell crystal from glass by this method. A better way is to ask permission to test the beads for hardness, with an ordinary finger nail file. If the crystals are genuine a light scratch across the edge will leave no mark but if they are glass

they will mark easily. The hardness of crystal is seven in the scale, considerably above that of a finger nail file.

This quality of seeming cold in crystal, especially in large pieces of it, led to the belief by the early Romans that quartz was ice that had frozen so hard it could never melt. Because of this belief crystal was used to relieve fever and its anti-pyretic value was attested by writers on medical subjects up to a surprisingly recent date.

Crystal is prized as a fetish by some of our desert Indians today and medicine men use small bits of it in mysterious rites. It is odd that several tribal words for crystal when translated literally mean "rock that looks like ice."

Although the old type of crystal gazing still flourishes, a new sort is fast taking hold. Astronomers have discovered that melted crystals form one of the best known reflectors for huge telescopes, through which they look out into space and tell us things that even the most credulous would refuse to believe from the old type of crystal gazer.

Doctors are using quartz crystal more than ever before. However, they have discarded the idea of curing fevers by its application. Science with the aid of fused crystal has given them such tools as the ultra-violet and infra-red rays which have

worked wonders beyond the dreams of the most imaginative.

In radio and television and in many other industries quartz crystals are used.

Desert dwellers and prospectors should keep on the lookout for possible deposits that might produce crystal.

Aside from its value in jewelry and the arts, scientific and commercial use may extend the market to where the mining of crystal will become a major desert industry.

For some reason there has been a general belief that crystal is practically valueless. Miners often refer to it as water crystal, or rock crystal, and tell you that although it is pretty it has no value. Since crystal is a pure form of quartz which in turn is the basic ledge matter in most metal mines, it is not uncommon for it to be encountered in the normal operation of gold mines or other such projects on the desert.

The United States navy has done a great deal to inform people of the value of large crystals. The navy uses a considerable amount of this mineral in its optical form for precision sighting instruments. Even with this information available, I have little doubt there are many hundreds of pounds of fine crystals thrown over dumps or ground up in mining machinery.

Another type of deposit likely to produce quantities of crystals on the desert is the pegmatite vein. This formation is usually found in countries where granites predominate. The pegmatite veins appear as light streaks cutting through the darker granite hills and can be distinguished by the coarseness of their structure. They are composed mainly of the associated minerals found in the granite, such as quartz, feldspar, and mica. These minerals have been dissolved by extremely hot water working toward the surface through cracks in the granite bedrock and have been redeposited in larger and purer masses. Along the centers of some of these veins occur pockets which almost invariably carry quartz crystals and in many cases other gems such as tourmalines, topaz, essonite garnets and beryl.

Since pegmatites rarely if ever contain precious metals there has been little prospecting done for them. From the point of pure enjoyment, I can recommend no other form of prospecting as highly as the search for crystal and its associated minerals.

This summer I have been working an old gem mine for crystals and although up to date the financial returns have been small the benefits of an interesting occu-

Interior of a crystal mine. As the miner must follow the pocket area the tunnels usually are quite crooked.



Some quartz crystals, such as these, are dark when found and are cut and sold under the trade name of "smoky topaz." Or they may be bleached by slow heating to a colorless crystal.

pation out in the open have more than repaid me. There are few thrills that equal the breath-taking suspense of opening up a crystal pocket and viewing for the first time the beauties that Mother Nature has hidden there.

One of the places where collectors may find samples of quartz crystals is an old prospect hole in the Chocolate mountains of Southern California near Beal's well, where quartz was mined years ago. To reach this point take the Niland road to Beal's well and park there. The old mine is a pit at the side of the arroyo less than a mile southeast from the well. Broken crystals may be found by scratching in the dump.



SAMPLES OF JADE DEPOSIT SENT EAST FOR TESTING

According to Conrad Kather, mining engineer who recently reported the finding of white jade in San Diego county, the ledge on his claims is more than 20 feet wide. If the stone proves to be true jade its discovery will be of widespread interest to gem hunters.

Most Americans think of jade as being green. Actually it takes many colors. In a partial color spectrum in John Goette's "Jade Lore" 35 different shades are found, ranging from white to almost black.

Samples of Kather's deposit have been sent to the geophysical department of the Carnegie institute for definite classification.

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NEVADA MINE PRODUCES TURQUOISE WORTH \$4500

According to the 1937 Minerals yearbook prepared by Sydney H. Ball, 545 pounds of turquoise valued at \$4500 were taken from the Snow Storm claim in the Royston district of Nevada by Leland F. Hand. The yearbook report which covers 1936 stated that turquoise also was mined from the Mildred and Marguerite properties in the Crow springs district and the Reik mine near Columbus, Nevada.

Moss and other agate was produced in Montana, jasper in California, agatized wood in Arizona and iridescent obsidian in Modoc county, California, the report continues. Considerable quartz was mined in the Black Hills of South Dakota, while a three-fourth of a carat diamond was found in Butte county, California.

Tropics in Your Yard

By JAMES GERRALD

Exponents of two types of desert gardens—tropical vegetation and cactus—differ on the landscaping values of their respective hobbies. For those who prefer luxuriant growth and fresh fruit any month in the year there can be no doubt of their choice. Here is the story of a man who has grown a distinctive tropical garden in his back yard—and his reasons for preferring it to conventional desert vegetation.

"NOW take my place—I can pick fresh fruit any month in the year. You can see why I prefer tropical vegetation to cacti for a desert garden. Look at that fruit. In the evening I can entertain guests on the lawn by the fountain. Would a cactus plot make as inviting a rest spot?"

J. C. Archias, seed man and nurseryman of Brawley, California, thus expressed his views bearing on the contro-

versy between proponents of the various types of "ideal" desert gardens.

He was showing me his famous back yard at 311 J street. Standing in that luxuriant little garden paradise I could not deny that the water-loving plants of the tropics have very convincing points in their favor when it comes to landscaping a desert home.

A busy man is Archias, but he takes time out from the seed business for one hobby—growing plants in his own yard. He started 15 years ago and some of his first seedlings are now great trees. He has added and changed each year until he now has a showplace of variety and charm.

The garden is a place of informal beauty, rustic as in nature yet molded skillfully to fit the planner's purpose. There is a restful glade filled with deep shade, the sound of running water, the glint of patterned sunlight on the lily pond, the smell of sweet growing plants. A winding path leads from the driveway under trees and arbors to a patch of open lawn where comfortable chairs are an invitation to visitors. A small stone bridge crosses the pond and a path beyond extends to the door of a screened summer house. Here is a natural outdoor home—living-room, bedroom, and pantry.

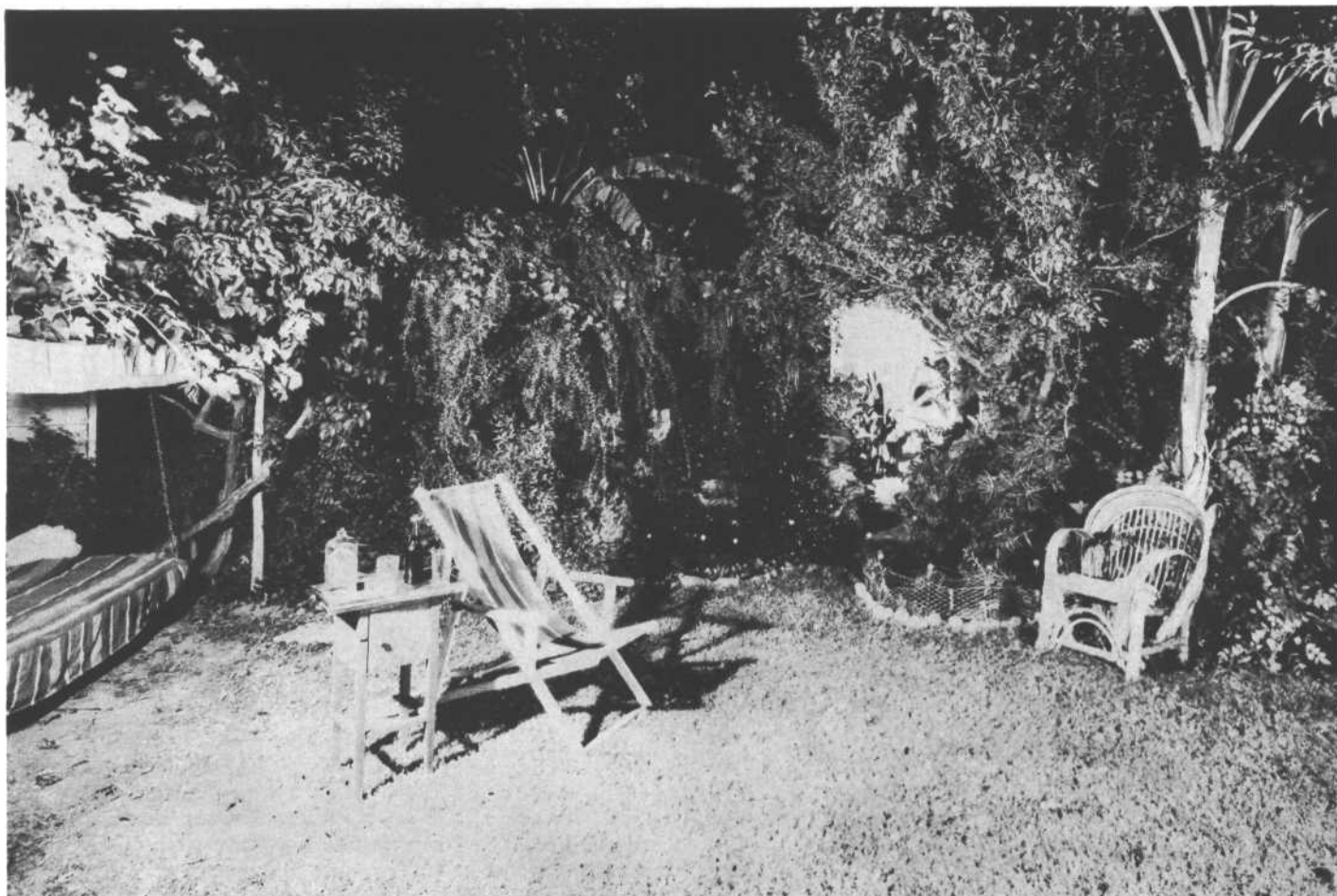
As dusk turns to darkness, Archias switches on hidden lights which throw red and blue colors on trailing vines and transform the fountain to a shower of jewels which splash with a merry sound on the glistening lily pads and rockery.

More than 700 plants are growing in less than 3000 square feet of ground space—the 50 by 150-foot lot holds a front lawn, a seven room house, screen house, and garage, in addition to the garden. Some of the plants are tall veteran trees; some are this season's annuals. Probably 50 or 60 species are represented. Some have long and formidable names; most of them may be recognized by the amateur gardener.

Most useful are the grapefruit trees, which produce sweet fruit nearly every week in the year. Of almost equal value are the grand old grapevines—Thompson seedless, Red Malaga, Zanti currants, lady finger, and Mission—which hand down



J. C. Archias stands beside a banana tree in his back-yard, one of 60 species of tropical plants he has grown on a city lot.



their luscious fruit from June until December.

Valencia oranges come in the spring months, navels come in December, lemons in November. Quince is ripe in early fall. Delicious dates are ready for picking in September and October. Winter Bartlett pears are ready in November, December and January.

Plums and bananas have a short season in July, the great Smyrna fig trees bear their fruit in July and August. In April the mulberry tree offers tasty pie filling.

Most unusual plant is the banana, which ordinarily does not grow mature fruit in this country. Year-round humid heat is necessary to produce commercial bananas. But this summer Archias' trees put out several bunches of average size fruit. Given a long summer, the tree will provide 50 to 100 bananas and become one of the best ornamentals for the desert garden.

The banana tree has a life cycle of three years. The first year it is a sucker sprout, the second year it has grown about 15 feet tall, and the third year it produces its fruit, and dies. Meanwhile the parent plant has produced two to six sucker sprouts at its base, which continue the cycle. The tree makes a showy display if it is trimmed back each year and protected from frost. In the spring its elephant-ear

In the evening hidden lights flood the glade and comfortable chairs beckon visitors to rest beside the lily pond and fountain.

leaves shoot up 12 to 18 inches in 24 hours.

Although Archias is an experienced nurseryman, he asserts that any amateur gardener with resourcefulness and patience can build a tropical garden in the desert. But it takes time. He says it is not an expensive hobby, that all the plants in his garden could be bought for \$50 originally.

Some areas in the desert, even though well irrigated, are not suited to growing a thick tropical vegetation. Archias recommends a loamy soil of deep drainage. Sometimes trenching and drilling will help drain the hardpan spots, and barnyard manure or sand will change the character of the soil where desired. Any farm advisor or nurseryman can recommend a course of soil treatment for best results.

"J. C." is surprised that his hobby should attract attention. "Anybody can do it," he says. Then he adds, "And more people in the desert should grow trees and shrubs. We need more attractive parks and street trees, as well as home landscaping. Sticks and stones do not make a home, but growing things do—trees for background and shade and

shrubs to tie the house down and give it color and grace."

In recent years hundreds of visitors have stopped at the Archias garden, even distinguished floriculturists from Holland, San Salvador, and other foreign countries. Archias invites visitors, is glad to have them inspect the plants and ask questions.

"What plants should an amateur choose to start a tropical garden and what conditions should govern the planting?" I asked him.

He pointed out a number of hardy plants, enumerated others which serve well in the basic plan. There are wide variations in southwestern soil, altitude, and climate which have a bearing on the adaptability of a tropical garden. His suggestions are primarily for Imperial valley conditions but may be altered for other parts of the desert.

For trees try Arizona ash, Cocos plumosa (palm), mulberry, fig, Washingtonia filifera (palm), Sapota (seedlings), winter Bartlett pear, orange, lemon, quince, Musa (banana), and Melia (umbrella).

Shrubs offer a much larger class, including many sizes and shapes, for trailing effects, hedges, blossoms, and filler. Here are some favored species: Abelia grandiflora, Antigonon leptopus (Rosa de

Continued on page 27



Al Smith, president of the Hiking Club and leader of the Havasupai canyon trek, is caught here under full load just before the start of the trip.

MEMBERS OF HIKING PARTY

Members of the party which took the Havasupai trip described in the accompanying story by Miss Osborn were: Bettie Dugan, Mildred Bailey, Olive Lloyd, Anne May, Pete Thompson, Abel Garcia, Fidel Baca, Woodrow Lewis, Frank Minnick, Michael D'Mura, Bill Miles, P. R. Powers (faculty advisor), Lillian Winn, Delight Power, Al Smith (president and leader), Everett Stiles, Robert Cushman, Joe Russac, Carol Collins, Edna Cordes, Elma Courter, Geraldine Stiles, Camille Hughes, Geraldine Isaacson and Juliet Osborn.

Organized in 1926, the Hiking Club of the Arizona State Teachers' College at Flagstaff each year goes on a five-day backpack trip, alternating these hikes between Grand Canyon, Rainbow natural bridge and Havasupai canyon. By way of training for the annual "long trip" members of the club spend their weekends during the school year on shorter jaunts in the vicinity of Flagstaff. Miss Juliet Osborn wrote the accompanying story of the 1938 hike to Havasupai canyon from her personal experience as a member of the party.

On the Trail to Havasupai

By JULIET OSBORN

FROM somewhere up along the trail ahead came the shrill note of the leader's whistle. That was the signal to put on our packs. A few minutes later the whistle sounded again and we fell into line—and were off for Havasupai.

All the food and shelter we were to have during the next five days was contained in the packs on our backs. But we were here of our own choice—and so the prospect of a long dusty trail held no terrors. We had been looking forward and planning this trip all through the school year, and now we were eager to be on our way.

There were 25 students in the line that formed on the rim of Havasupai canyon that May morning—members of the Hiking Club of the Arizona State Teachers' College at Flagstaff.

We were all supposed to be in fine hiking condition. During the school year each of us had covered at least a hundred miles of cross-country tramping in the vicinity of Flagstaff. We had devoted all our Saturdays and many of our Sundays to five, ten, 20 and even 30-mile trips. From a motley group of 35 or 40 at the beginning of the year we had dwindled to a sturdy 25. Now our reward and the test of our fitness was to be a five-day trip to a remote little Indian village far down in the bottom of one of those scenic gorges which are tributary to the Grand Canyon of Arizona.

Our preparation had begun with the making of packs. We use a special back-rack with a piece of canvas stretched taut across a wooden frame. The boys, by some mysterious process of soaking and tying the wood, made the frames, while the girls did all the sewing. The total cost was not more than \$1.50 for each pack.

But packs were the least of our worries. Planning meals for 25 campers for five days, choosing food that is inexpensive yet tasty and sustaining and not too heavy or bulky, is no small problem. Cooking utensils are awkward things to carry in a backpack—but we must have them.

Each member is responsible for his or her own bedding and clothes. For bedding, the idea is to guess by some divine power the least number of blankets that will keep one from freezing. Of course, the fewer the blankets the lighter the load—but these Arizona nights do get cold.

My pack contained the following: three blankets, pair of tennis shoes, two pairs socks, shirt, two pairs shorts and a bandanna, change of underwear, light sweater, heavy jacket, towel, bathing suit, small cosmetic bag—and about six tons of Grape Nuts.

Pajamas? Anyone who wears them is hooted out of countenance.

My wardrobe was more than adequate—in fact I frequently was in danger of being over dressed. Some of the boys, I believe, did not take a change of clothes. Things can be washed in the creek.

We rode to the rim—150 miles from Flagstaff—in a truck, over paved road to within 10 miles of Grand Canyon, then over 50 miles of the worst road that ever went by that name. There is no use trying to describe the discomfort of 25 people with 25 packs in the back of one truck.

The truck deposited us in the sage brush on the rim of Havasupai canyon—girls on one side of the road, men a hundred yards away on the other.

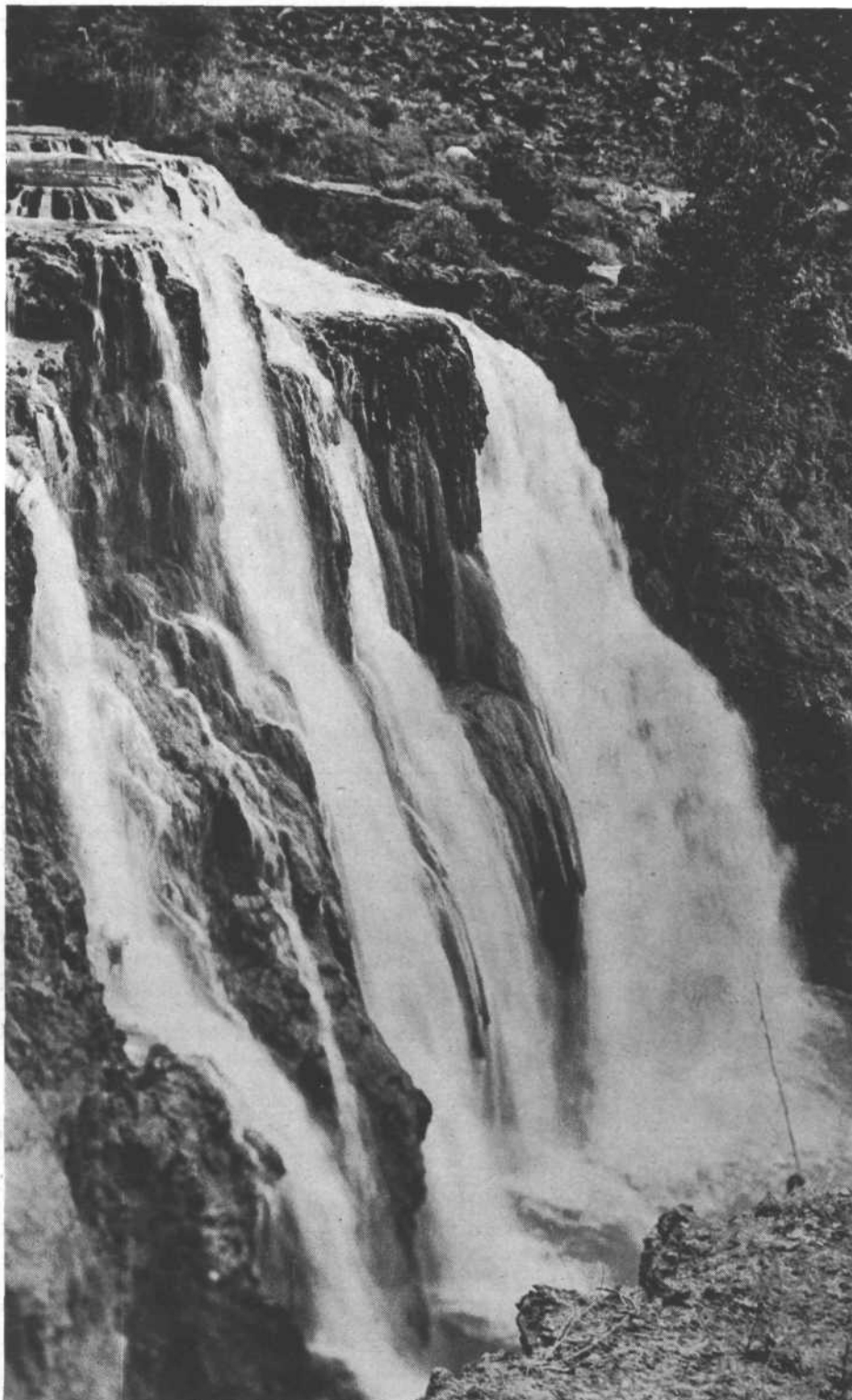
At an elevation of 6300 feet the nights are cool and little campfires were kindled for both heat and light. Most of us put on all the clothing we had before rolling up in our blankets on the rocky ground. Some went to sleep at once and others stayed awake to chat, despite the protests of their neighbors. A few were disturbed by the fact that they had made their beds on anthills, cacti or rocks, or with their heads downhill. Aside from these annoyances and the frigid young hurricanes which kept working into the bedding, it was a perfect night's rest for everyone.

Before breakfast we were given numbers which fixed our places in the line on the trail and at mess time. Each hiker washed his own dishes and there was a clean-up committee for the pots and pans. Clean-up and cooking committees were selected by the president and announced with the menus previous to each meal.

When Al Smith, president of the club and leader on the hike, blew his whistle for the start that first morning the boys were carrying packs of from 50 to 60 pounds each and the girls from 25 to 35 pounds. We carried 275 meals on our backs.

The distance by trail from the rim to Havasu creek in the bottom of the canyon is seven miles. The first part of the descent is steep. By the time we reached the more gradual slope near the bottom of the canyon the sun was pouring heat down on us and the air between the canyon walls was oppressive. At noon we were still plodding along ankle deep in gravel and sand—and each of us knew the entire 275 meals was in his own pack. It seemed that the whistle for the noon stop would never blow.

It was one o'clock when we reached

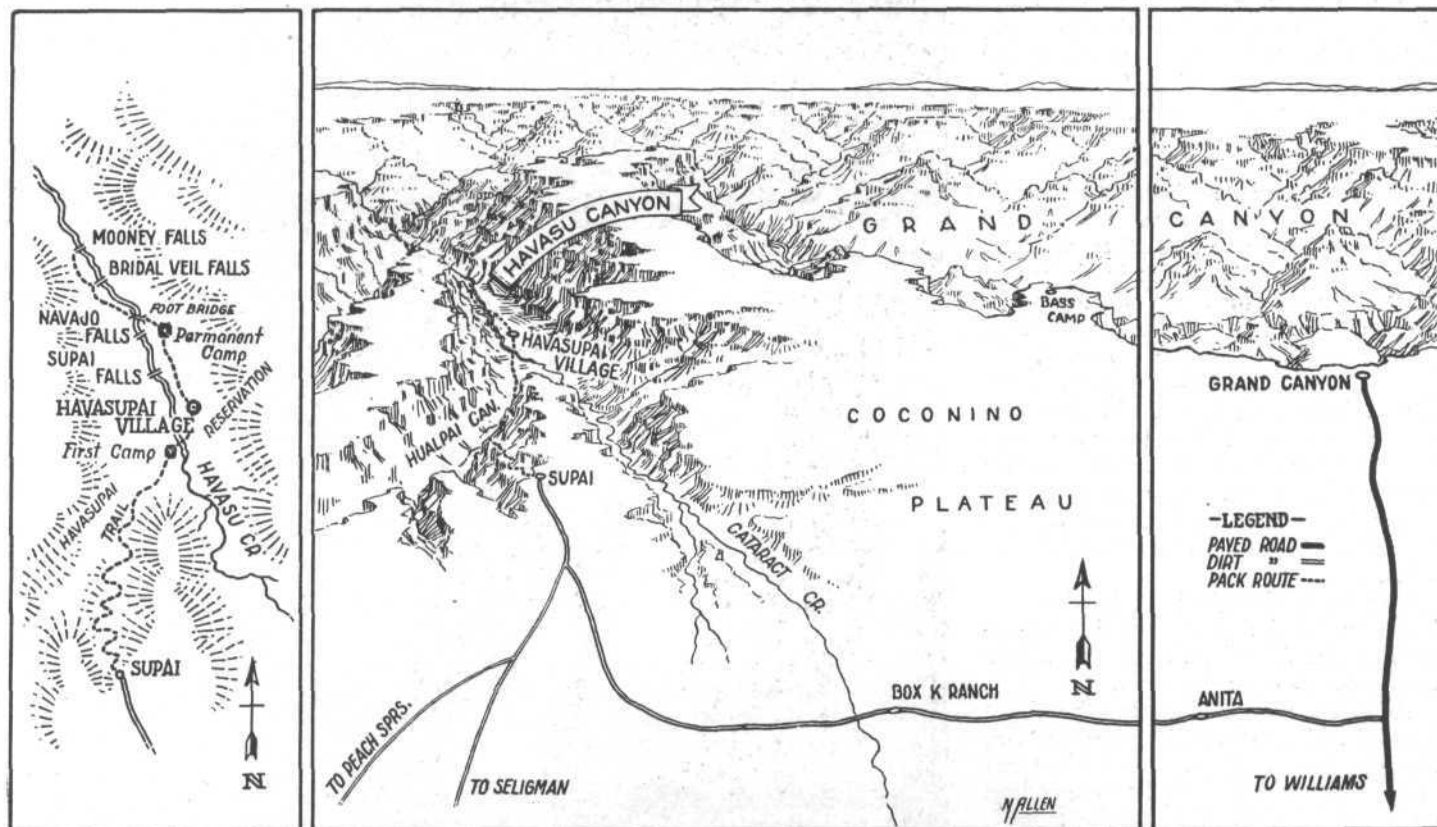


Navajo falls in Havasupai canyon. The bikers established their camp near the creek just above these falls.

the source of Havasu creek. Farther down the canyon this stream pours a great volume of water over a series of magnificent waterfalls but the source spring of the creek is not impressive. It consists of a seepage area where the water comes to the surface and remains in stagnant pools among the rocks and pebbles.

At three o'clock we shouldered our

packs again for the three-mile hike to Havasupai village near where our base camp was to be established. There we were greeted by Charles Schaeffer, the Indian agent, and after draining his supply of cool drinking water we continued to our campsite on a bluff overlooking the beautiful Navajo falls. It is a gorgeous spot but we were too tired and hungry



that evening to appreciate the beauties of nature.

After an early breakfast the next morning we started down the canyon to visit the falls below. First we came to Bridal Veil. It is a lovely picture but the memory of this place has been dimmed somewhat by a grander view which awaited us farther down the canyon.

We pushed on through the heavy growth of shrubbery which sometimes approached the density of a tropical jungle. And then we came to Mooney falls.

As I stood on the top of that great 200-foot cataract I felt that sensation which always comes in the presence of some titanic work of nature. Such moments as that first vision of Mooney falls bring a deep sense of religious awe. It seems almost sacrilegious to attempt to describe such a view—but there is also the desire to share such beauty with others.

The canyon walls rose hundreds of feet on both sides. The regular markings of the strata in the cliffs gave the effect of huge red bricks, laid in place by some prehistoric race of giants. The afternoon sun brought out their most striking colors.

Mooney falls drops down into a foaming pool of blue-green water, and then the stream placidly flows on and encircles a little island covered with a luxurious growth of trees in many different shades of green. The most impressive thing about Mooney falls is the coloring, re-

flected to some extent perhaps from the turquoise shading of the water. Havasu in the Indian language means "land of the blue-green water."

We scrambled over rocks and through tunnels and down slides to the foot of the falls. We could not approach too close, the spray was too heavy, but behind the falling water there were little fern-hung grottoes. I momentarily expected Puck or Peter Pan to come tripping out of one of those dark damp mysterious caverns.

We left Mooney falls reluctantly to return to Bridal Veil where we spent the rest of the afternoon swimming and throwing mudpies.

That evening we sat by the campfire and chatted. I pondered a thought that had come to me many times along the trail—what a fine companionship this ex-

perience had created among young people who in the normal life of the school had widely diverse interests. Association in the great out-of-doors does that for people.

Our cooks for the evening were an Oklahoma teacher, an ex-cowpuncher, and our college librarian. In the group were two Californians—"prune pickers" we called them—two boys from Indiana, numerous Arizonians, and others from Texas, Florida, New York, Michigan and Old Mexico. They represented every phase of school life from campus leaders to the most inconspicuous bookworm—some brilliant, some dumb (according to the verdict of the pros), big and little, rich and poor. But on the trail and in our camp life there was no distinction. We were just a band of friendly trail-hounds with one thing in common—the ability to "take it" and laugh.

I must mention Pete Thompson especially. He is president of the Associated Men Students at A. S. T. C. A former cowboy and an experienced outdoor man, Pete was a pillar of strength and good humor on this hiking trip. With a half-inch beard, uncombed hair, patched Levis, an unironed gray shirt and a disreputable felt hat, Pete hardly would have qualified for a style parade. But his line of stories told in most picturesque language, and a heart as big as all outdoors made him a fine companion for such an outing as this.

That evening some of us accepted the

MENU ON THE TRAIL

Following is a typical day's menu during the 5-day outing:

BREAKFAST — Prunes, cold cereal, bacon, syrup, bread, butter, coffee.

LUNCH — Spaghetti, canned tomatoes, canned corn, jam, bread, butter, coffee.

DINNER — Stew, pork and beans, rice, peaches, bread, butter, tea.

Indian agent's invitation to see the Havasupai movies. The picture was "Covered Wagon," presented by the Indian service for the entertainment of the Indians. It was an outdoor theater and everybody sat or lounged on the grass. This was the third showing of the picture—and the same audience had been there every night.

A toothless Indian woman beckoned me to come and share her blanket. She would look at the screen, clap her hands and then turn and face me, giggling confidentially as if we shared an exciting secret. Before the show was over she lay down on her blanket and went to sleep. Only a few of the Indians understood English, but they were enthusiastic patrons of the show nevertheless.

From Mr. Schaeffer we learned about the Havasupai, Havasuwaipaa, Havasu, Supai or Coconino Indians, as they are variously called. The reservation was established in 1882 and the tribe numbers about 200.

Their origin is indefinite, one story being that they are the descendants of a small group of Indians who separated from the Hualpai Indians who now occupy the plateau above.

They are an industrious and hospitable people, engaged chiefly in agriculture. Peaches, cherries, squash, corn, and other fruits and vegetables are grown in little patches on the floor of the canyon surrounding the village.

Some of them live in houses erected by the government but many prefer hogans built of logs and mud. Their only communication with the outside world is along the pack-trail over which we had entered the canyon.

We noted that the agent's house was furnished with an electric refrigerator, a large stove, and a piano, and learned that these had been brought down the trail on a sled.

Our last day in the canyon was spent eating, loafing, and swimming. When night came and we were packing for an early morning start there was a forced gaiety that failed to conceal the regret all of us felt that our outing was about to end.

Our packs were lighter, but we faced a long uphill climb to the rim of the canyon. The Indians bid us a friendly "Goodbye! Come back next year!" and we took the homebound trail.

It was a long tiresome journey to the top. But when we reached the rim and sat down for a last look at our "paradise lost" we knew that the memory of an ex-

With food and shelter for five days on their backs the hikers took the winding trail from the rim above Havasupai canyon. Each member of the party wore a number and occupied a regular place in the line.

perience so rich in comradeship and beauty would remain long after the aches were forgotten.

PIMA BASKET TAKES HIGH AWARD AT CEREMONIAL

A Pima Indian basket was awarded the grand sweepstakes prize among all entries at the exhibition held in connection with the Gallup, New Mexico, Inter-Tribal Ceremonial. Baskets and pottery made by the Pima, Papago, Apache and Maricopa Indians took seven first and six second places in the Gallup awards.

SEEKS PERMIT TO OPERATE BOATS ON LOWER COLORADO

Regular boat trips on the lower Colorado river, discontinued nearly 50 years ago, may be resumed if Charles Sturges of Yuma gets the franchise he is seeking.

Sturges recently applied to the Yuma county board of supervisors for a permit to operate between Imperial and Parker dams, a distance of over 100 miles. He believes that operation of passenger and sightseeing craft is feasible since the flow of the river has been regulated by Boulder dam.

The Yuma supervisors referred him to the War department, since the Colorado is officially a navigable stream and under the jurisdiction of the federal government.





COMMUNICATION

Photograph by Wm. M. Pennington

"Feel" of the Desert

By JOHN STEWART MacCLARY

*I*N barren Navajoland the native dwellings are far apart. Seldom are more than two or three hogans to be found in a single settlement, and there are neither backyard fences nor party-line telephones across which gossip may be traded.

But every human being feels the need for communication with his fellows and the Navajo Indians are no exception to the rule.

Time was when communication in the Navajo country was limited. Hurried news of importance might be flashed by smoke signals or carried by mounted messengers like the one in this Pennington photograph. And gossip was exchanged when groups collected for ceremonial dances.

Today the reservation is criss-crossed with passable roads and netted with telephone lines installed by Uncle Sam—but the tribal news that is intended only for Navajo ears still spreads from hogan to hogan by way of the Indian and his pony.

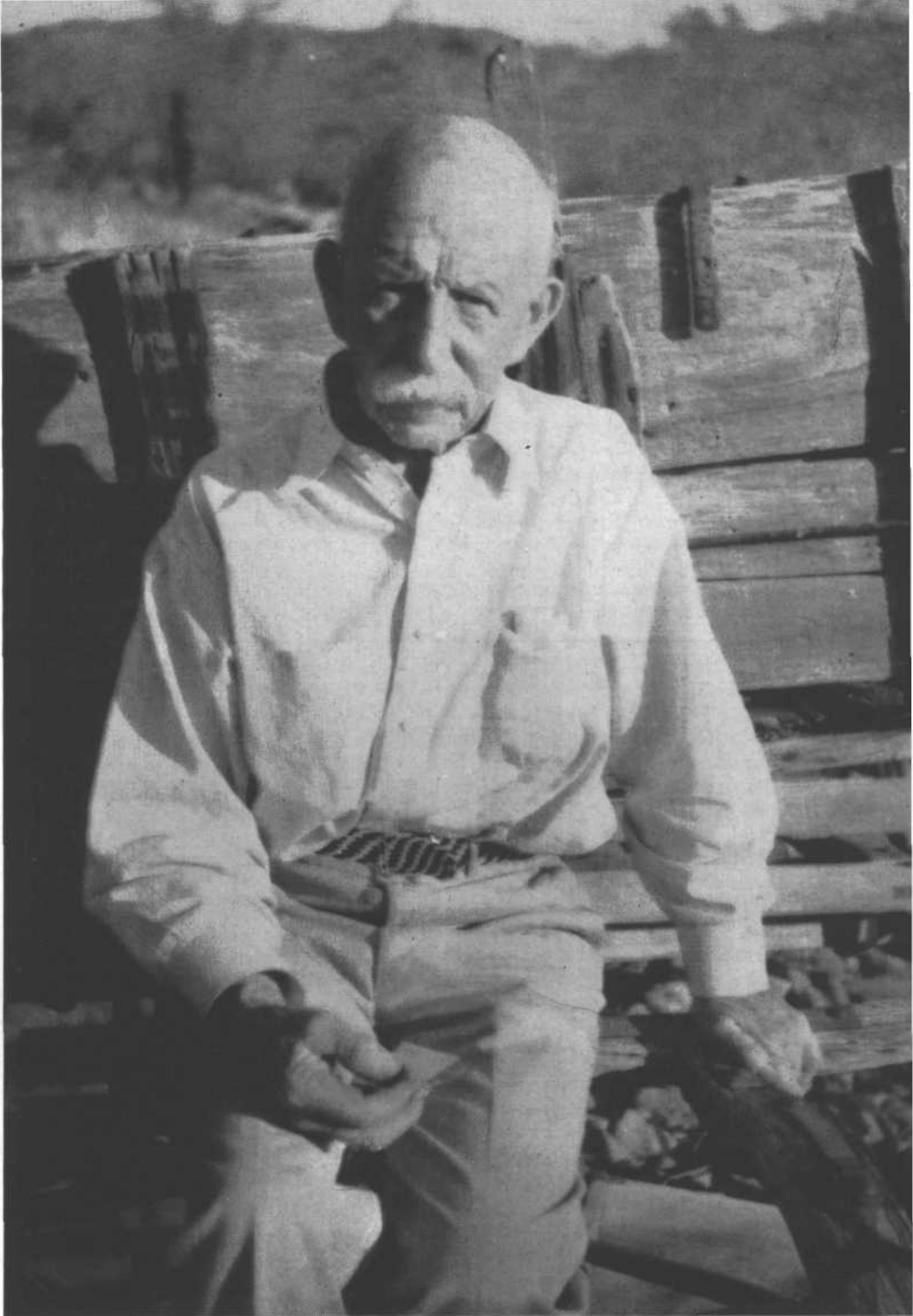
Not all the frontiersmen who played leading roles in the development of the Southwest were two-gun sheriffs and bold bandits. In a brown stone house on the outskirts of Tucson lives a quiet little man whose scientific studies in the lower Colorado river basin and on the Arizona and Sonora deserts during the last half century have led to enough adventures to fill a thrilling volume. Godfrey Sykes is one of the outstanding personalities on the American desert today—but because he is a very modest man, the world at large knows little about his exploits. Readers of the *Desert Magazine* will enjoy meeting this man.

Sykes, of the American Desert

By J. WILSON McKENNEY

GODFREY SYKES was 64 years old in the summer of 1925 when he drove an old car on the *Camino del Diablo* west from Ajo, Arizona. Stuck in the sand, he labored bare-headed to free the car while his thermometer recorded 115 degrees. He noted the temperature of the water with which he rinsed his mouth, counted his pulse before and after each attack with the shovel, jotted down the time and conditions when he came near collapse, and kept a record of exactly the amount of water he required.

This man, described by his friends as "a paragon of virtues and a model scientist of the desert," summarized his findings on human resistance to extreme heat in a paper for the American Geographical Society in 1927. Where hundreds of other men in the same circumstances would have wandered panic-stricken to their deaths, Sykes was "cool" in a desert



Godfrey Sykes, veteran geographer of the desert, beside the ancient wagon in which he camped on the site of El Centro in 1905.

inferno. Self-sufficiency is in evidence throughout the record of Sykes' active and thrilling life in the desert southwest.

Godfrey Sykes is living now in a brown stone house on the outskirts of Tucson, within a half-mile of the Carnegie Institution's Desert Laboratory. He retired from the Institution in 1929 but at 77 years of age he is still active in research and writing.

Among scientists he is best known as a geographer and authority on the Colorado river. But his list of vocations also includes cowboy, freighter, railroad man, civil, mechanical, and metallurgical engi-

neer, cartographer, hydrographer, and all-around handy man.

Late in 1937 the Carnegie Institution and the American Geographical Society published a 193-page book by Sykes entitled *The Colorado Delta*. Representing the summary of his 45 years' study of the turgid stream and its bed, most of it will be passed over lightly by the average layman. But it embodies much authentic human and natural history, valuable data on stream dynamics, and keen observation of a river's temper. It is an important contribution to our knowledge of a heretofore little known region.

I sat in Sykes' comfortable old-fash-

ioned sitting room. Looking down on us from the wall was the 30-year-old mounted head of the bighorn sheep he had carried down cactus-forested Pinacate mountain. William Hornaday, I recalled, had praised Sykes' superhuman feat in his *Campfires on Desert and Lava*, giving a lucid insight into Sykes' character.

We talked of many things, mostly of his work on the Colorado river and his trips to the Pinacate region. He has floated down the river 30—perhaps 40 times. One of his first trips—in the spring of 1891—ended near Salton Sea, almost completing the first boat ride down an unknown stream to a mysteriously growing lake in the desert. Stopped in a mud flat near the present site of Holtville in Imperial valley, he waded to safety but later returned to the sea to make its first circumnavigation. The craft in which Sykes and the late Dr. W. J. McGee—a ponderous man who nearly foundered the boat—made the trip around the shore of the Salton Sea now lies in decay behind the Sykes home.

Probably Godfrey Sykes knows more about the Colorado river than any other man. He is not interested in the political aspects of the stream or its industrial possibilities; his interest is more elemental. He has ridden its breast night and day, measured it and dammed it, fought its eddies and trod its banks, cursed it and blessed it. For more than four decades he has been near it, watching it as critically as he watched his own temperature and pulse when he was stuck on the *Camino del Diablo*.

Recalls Old River Captain

He laughs as he recalls interesting and amusing incidents on the river: Capt. Jack Mellon and the cuspidor he used as a weapon to control the unruly crew of his river steamer; Indians floating their melon harvest to market on the brown flood; narrow escapes in the rapids of Grand Canyon; boom towns and desperados.

It hardly seems possible that one man, even one nearing the four score milestone, could encompass in his life so many thrilling experiences. Born in London, England, in 1861, Sykes grew to young manhood in the fog-draped city. Educated in private schools, he began his broader education in Japan and Australia as an engineer. After a few years of wanderlust, he found the Texas cattle country where he worked a while, then moved westward with his horses to the bright sunlight of the Arizona desert.

Dr. D. T. MacDougal, first director of the Desert Laboratory, met the young engineer about 1900, beginning a long association which has ripened into mutual affection and admiration. The two men were together in a camel trek on the Libyan desert and later they explored together vast reaches of the Sonoran deserts.

Sykes is a slender man, narrow-shouldered and short of stature, seeming to belie stories of his great strength and endurance. But these stories are not mere legends, they are matters of printed record. He walked for 13 hours across the Sonoran desert without a hat to cover his bald head, carrying only a little water and no food, returning to camp fresh and jaunty after his 43-mile *pasear*. To him it had not been a foolhardy sporting event—he had gone to sea level on the Gulf of California to reset his aneroid in order to get correct elevations for his maps.

Stranded on Gulf Coast

One of the stories rivals any adventure classic of the delta. About 1900 Sykes teamed with Charlie MacLean for a boat expedition which was to have its destination in Central America. They started at Yuma in the *Hilda*, a small boat but well-provisioned and seaworthy. They progressed southward without incident to Fermin Point on the peninsula side of the Gulf of California, where they pulled the boat on shore for the usual evening camp. Later their attention was attracted by a glare of light. The *Hilda* was in flames, caused by the accidental dropping of a match. The two men saved only a canteen, a pot of beans, 13 pieces of oil-soaked hardtack, and a cask of fresh water.

"We were in a pretty fix," Sykes smiles when he recalls the experience now. "Southward the nearest settlement was at least 200 miles away and there was no water in between. Northward the nearest settlement was 150 miles away on the Colorado river, but in between lay a great alluvial plain, cut by numerous creeks and arms of the river, some of which would be very difficult to cross.

"We lost a day in a futile attempt to climb the steep eastern slope of the mountains, planning to reach the settlements on the west side of the peninsula. We gave that up, returned to refill our canteen and started north. Lack of water was our chief concern, but we found a tiny water hole just as our canteen ran dry."

Coyote Meat Too Tough

Supplementing their meager hardtack with the flesh of an old coyote which Sykes described as "the rankest meat I ever ate," a few oysters from the rocky shore, and one fish, the men knew the pangs of real hunger.

Blinding days merged into bitter nights as MacLean and Sykes trudged hour after hour northward, stopping only a few minutes at a time for rest.

Finally they reached the Hardy river and "took two of the longest drinks on record." Two days later they pushed their way through the brush to the west bank of the Colorado, swam the stream, and found their way to the Colonia Lerdo.

There they found food after seven days of terrible privation and hardship. They considered the 75-mile walk on to Yuma a comparatively easy hike.

The harrowing experience Sykes shared with his friend was only one of a series of exploits which demonstrated his amazing endurance and adaptability. His associates describe him as an ideal camping companion because of his ingenuity in making the best of any seemingly hopeless situation.

Not content to compile his scientific conclusions in a four-walled studio, he prefers to get his facts from Nature's far-flung laboratory. Until recent years he was an incurable "tripper," dashing away for a journey of several hundred miles on a moment's notice.

A few years ago when he showed young Dr. T. D. Mallery the route to his string of rain gauges on the desert, Sykes started out in his old car and Mallery followed. Although the 35-year-old scientist can claim to be a fast and skillful driver, he testifies that all he saw of Sykes on that 300-mile trip was a cloud of dust far ahead.

His eagerness to learn what lay beyond the gray desert horizon brought Godfrey Sykes a vast fund of information about the arid wastes, the turgid rivers, the flora and fauna of the American Southwest—a treasure which he has generously bequeathed to all lovers of the desert.

Weather

AUGUST REPORT FROM U. S. BUREAU AT PHOENIX

Temperatures	Degrees
Mean for month	89.9
Normal for August	88.5
High on August 1st	111.
Low on August 18th	67.
Rain—	Inches
Total for month	1.11
Normal for August	0.95
Weather—	
Days clear	16
Days partly cloudy	15
Days cloudy	0

G. K. GREENING, Meteorologist.
FROM YUMA BUREAU

Temperatures—	Degrees
Mean for month	90.4
Normal for August	90.4
High on August 21st	112.
Low on August 15th	61.
Rain—	Inches
Total for month	0.25
69-year average for August	0.50
Weather—	
Days clear	19
Days partly cloudy	11
Days cloudy	1
Sunshine 90 per cent (362 hours out of possible 414 hours).	
Colorado river—	
August discharge at Grand Canyon 550,000 acre-feet. Discharge at Parker 607,500 acre-feet. Estimated storage behind Boulder dam was 22,940,000 acre feet on September 1st.	



Ridin' for Fun --At Victorville

COWBOYS who ride range out in the Mojave river country on the Southern California desert are polishing up their leather in preparation for their annual jamboree—the Victorville Nonprofessional Rodeo.

This show is for amateurs—the working cowhands who come in off the Joshua tree range and spend three days roping and tying just for the fun of it.

But despite the fact that no cash prizes are offered, the Victorville rodeo has become one of the most widely known roping and riding events in the West. Its success is due to two factors—the first is that those Mojave desert cowboys can ride—and the other is Cal Godshall, the directing genius who manages the show.

The Victorville rodeo was started on the Godshall cattle ranch. Years ago the cowboys would gather there on weekends for friendly competition. The events attracted increasing numbers of visitors including such writers and picture stars as Gene Autry, Harry Carey, Clark Gable, William S. Hart,

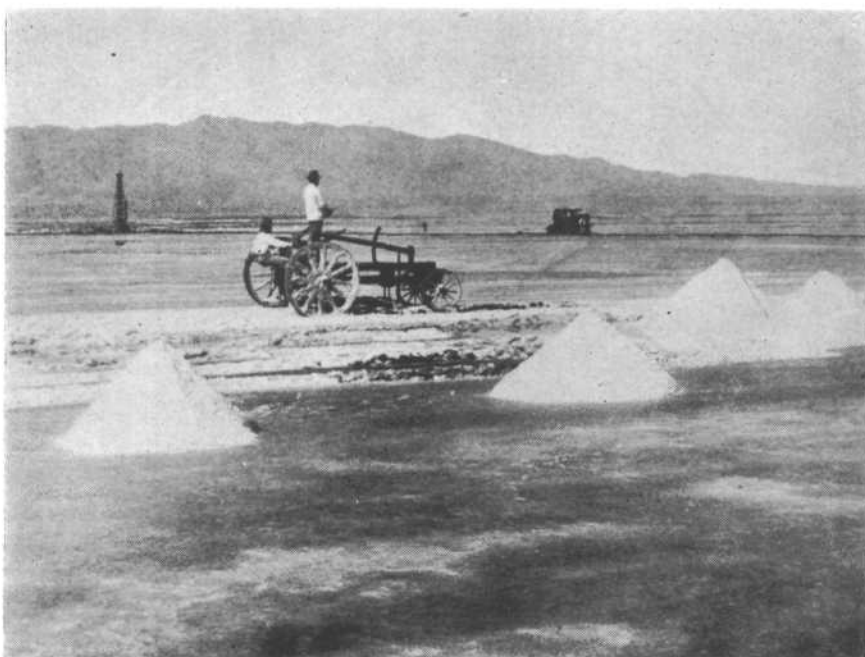
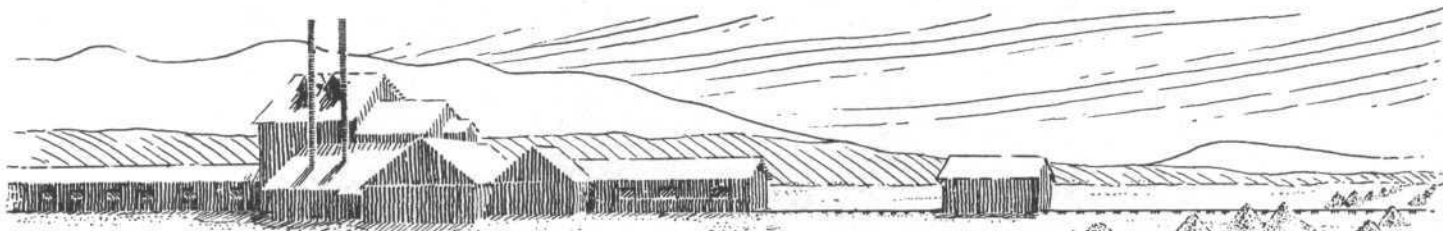
Jeanne Godshall, in the picture above, is a daughter of the Mojave desert. Her home is a cattle ranch near Victorville and she has been a prominent figure at 75 western rodeos in the past four years.

Frank Scully, Will James, Jim Tully, Fred Jones and the late Will Rogers.

Four years ago the contests had become so popular it was decided to hold them in Victorville as an organized rodeo. This year's program is to be held October 14, 15 and 16, and judging from past records the 5000-seat grandstand will be filled to capacity. The arena is only 60 by 110 yards in dimension, and this gives the crowd a close-up view of the show and adds to the interest of the spectators.

Eighteen-year-old Jeanne Godshall helps her father stage the show and has been instrumental in securing widespread publicity for the event. Jeanne is truly a desert girl, being a native of the little settlement of Tecopa in Death Valley, where her parents were interested in mining property years ago.

She is an excellent rider and has been prominent in many western rodeos during the past four years. Recently she was selected by Los Angeles Shriners as their "flying cowgirl" and covered 11,000 miles and nearly 30 cities between by plane, dressed in her white buckskin outfit. The purpose was to invite Shriners from all the major cities to come to the Los Angeles convention.



Only a few persons will recall the sensation created in 1891 when newspaper headlines throughout the nation announced that a mysterious lake was being formed on the Southern California desert where the rainfall was only three inches a year. That was before it was generally known that for countless ages the fickle Colorado river had been alternating its discharge between the inland basin of the desert and the Gulf of California. Many strange theories were offered regarding the source of this newly-formed lake. Here is the story of the newspaper man who solved the mystery. The 1891 sea evaporated long before the first white settlers came to Imperial Valley. The accompanying sketch and photograph are of the salt works in the bottom of the basin in 1900.

Mystery Sea of the Desert

By TOM HUGHES

WHEN the rumor reached San Francisco in June, 1891, that a lake suddenly had appeared in the middle of the Colorado desert of Southern California, the editor of the Examiner wired to a former Examiner reporter, Harry Patton of the Banning Herald, to drop everything and run down the story.

Patton found the lake and sent in several hundred vivid words telling what he had seen, and several thousand more about his experiences in finding it.

His first report was that the Salton Sink, whose deepest hollow had always held a trickle of concentrated brine, was filling with salt water. This was startling news to readers in the southwestern part of the United States.

A couple of weeks later Patton began

filing stories of how he had driven across the desert to the Colorado river where he had engaged a boatman named Converse, and together they had sailed down the swollen Colorado.

Below Yuma, on the Mexican side of the boundary, they found water pouring through a wide break in the west bank of the river. Boldly steering their craft through the break they were borne westward for many miles and then in a north-westerly direction into American territory again.

They shot rapids, so Patton reported, navigated between threatening palisades of newly-cut desert silt, portaged a waterfall or two, and after several days floated out upon the bosom of a brand-new lake that already covered many square miles of the old Salton Sink.

Patton's story would have been understood and believed if his readers had been

familiar with the dramatic history of the Colorado river—how it had changed its fickle course time and again, flowing one season into the Salton Sink and perhaps the next year pouring its flood waters into the Gulf of California.

Today, any school boy in the Imperial valley understands how this took place, and why. The Colorado river over a long period of time had erected a great silt dike across the delta from Algodones to Black Butte and the stream literally flowed on the top of the crest of this hill—sometimes to the south, emptying into the gulf and at other times turning north into the below-sea-level basin now known as Imperial valley.

For many years prior to 1891, however, the river had been pouring its water into the gulf and the Salton basin had been dry so long a plant had been set up in the bottom of the sink for the recovery of salt which was deposited there. White men regarded stories of a Salton sink full of water merely as Indian legends.

And so, when Patton's reports of his boat ride from Yuma to Salton sea appeared in the California papers there were many readers who doubted their truth.

One of these readers was Captain Thomas Fraser. Fraser was a practical man. He had designed and built the Lick observatory. Later a San Francisco syndi-

cate sent him into the desolate Cocopah mountain region near the mouth of the Colorado river in Lower California to investigate reported sulphur deposits there. He sailed around the Cape San Lucas and up the gulf to its head.

During his investigations in the delta area, Captain Fraser saw the great tidal bore come in from the gulf and roll over the salt flats, submerging thousands of acres of lowlands and extending many miles inland toward the Salton Sink which lay to the north of the Cocopahs. It is reported these tidal waves have reached a height of 16 feet above mean sea level.

The silt dike which separates the Gulf of California from the Salton basin is but 37 feet above sea level at its lowest point.

It is not likely Captain Fraser had any data regarding the elevation of the dike, but he was a surveyor and had a practical knowledge of land levels. When he saw those monstrous tides race across the salt flats of the delta and roll on northward toward the sunken basin beyond, there came to his mind an apprehension of possible catastrophe.

It was natural then, that years later when the newspapers carried Patton's story of the new lake that was being formed in Salton Sink the captain recalled his own observations of a previous period. He was too practical a man to accept the theory published by a Redlands newspaperman, that the water probably "was seepage from the Great Salt Lake."

To Walter Hathaway of Banning, the captain confided his tide flow suspicion and his determination to verify it if true.

On a hot July afternoon the two of them took the train at Banning for Indio. Before his death a few months ago, Hathaway told about the details of the trip. He recalled that the thermometer in front of the depot at Indio stood at 101 degrees at midnight.

At Salton station, on the northwest rim of the Sink, they found the water lapping the second story windows of the New Liverpool Salt company's warehouse. They also met Converse, with the same flat-bottomed boat that had made the trip down the flood channel from Yuma.

Engaging the boat, with food and drink and the skipper's services, they embarked on the mysterious waters in the dead of night. They rowed until dawn and through blistering heat until 11 a.m. when they approached the southeast shoreline.

Here they saw a muddy stream pouring into the Sink from the south. This evidently was the mouth of the flood



Old photograph of Capt. Thomas Fraser who had his own theory regarding the forming of Salton Sea—and learned he was wrong.

channel which is known today as New river.

Stripping off shoes and pants, Hathaway tried to wade ashore, but soon retreated from the scalding mud. With shoes on his feet and a board to keep him from sinking into the slime he tried it again and made better progress but was not able to go far enough to determine for sure whether the water flowing into the sea at this point was fresh or salty.

The sea at this time was approximately 12 miles across and 30 miles long, and

the mariners reported they could touch bottom at any spot with an oar.

After a siesta in the scant shade offered by the sail, the explorers late in the afternoon rowed toward the east. Eventually they came to another swifter channel—the Alamo—where it was ascertained beyond any doubt the stream was fresh water from the Colorado river—as Patton had reported.

Captain Fraser stood by and watched his cherished theory float away on the turgid flood.

The Colorado with characteristic fickleness turned back into its old channel with the passing of the 1891 summer flood and by 1900 when the advance guard began arriving for the settlement of Imperial valley lands there remained nothing but a briny sump at the low point in the basin.

Salt recovery operations were resumed and the sink virtually was a dry basin until the memorable flood of 1905 when the diverted flow of water into the Imperial valley for irrigation purposes got out of control and the stream again poured its waters into the sunken basin. But that is another story.

For countless ages the Salton Sink was filled and refilled at irregular intervals according to the whims of an ungoverned stream. But that day is past. Boulder dam has been erected as an all-time barrier against the erratic discharge of flood water into the Salton basin.

The level of the sea will be maintained, however—not at the caprice of a mad river, but by the regulated drainage runoff from the canals of the Imperial Irrigation district.

Prizes to Amateur Photographers

Each month the Desert Magazine offers cash prizes to amateur photographers of desert subjects. These contests are open to all readers of the magazine regardless of residence.

The first award is \$5.00 and the second \$3.00. The pictures may include any desert subject, photographed on the desert. Close-ups of plant and animal life, unusual personal pictures, well-composed landscapes and scenic effects, rock formations, water holes, oases and recreational pictures are among the subjects suggested.

Following are the rules governing the contest:

1—Pictures submitted in the October contest must be received at the Desert Magazine office by October 20.

2—Not more than four prints may be submitted by one person in one month.

3—Winners will be required to furnish either good glossy enlargements or the original negatives if requested.

4—Prints must be in black and white, 2 1/4 x 3 1/4 or larger.

5—Pictures will be returned only when postage is enclosed.

For non-prize-winning pictures accepted for publication \$1.00 will be paid for each print.

Winners of the October contest will be announced and the pictures published in the December number of the magazine. Address all entries to:

CONTEST EDITOR,
DESERT MAGAZINE,
El Centro, California.

The Desert Trading Post

Classified advertising in this section costs eight cents a word, \$1.60 minimum per issue—actually about 10 cents per thousand readers.

BOOKS—We have a stock of the best reference books available on desert life. Write your requirements or for quotations on our combination offer. Desert Crafts Shop, 597 State St., El Centro, California.

BACK NUMBERS of the Desert Magazine. Beginning Nov. 1 there will be an advance in price on some of the back numbers. If you miss any copies from your Vol. 1 file, order them now at 25 cents a copy, except; Vol. 1 No. 1 (November 1937).....50c The supply of this first edition is very limited but remaining copies go at the above price beginning September 15. Complete file, first volume, November 1937 to October 1938 in handsome loose-leaf binder, complete postpaid in United States, for only\$3.50 Complete file, first volume, in loose-leaf binder with one year subscription paid in advance\$5.00 All prices above include sales tax and postage.

ARIZONA PETRIFIED WOOD—gem quality, \$1 per pound. Peridot \$1 ounce. Birdseye jasper \$3 pound. Arizona stones cut and polished, prices right. Prehistoric pottery, nice pots for \$5. Address E. P. Matteson, Rt. 9, Box 626B, Phoenix, Arizona.

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DESERT FORD—equipped with 7½-inch tires and trunk rack. 1929 model coupe in good running condition. Just the car for exploring the out-of-the-way places where no roads exist. Car in garage at El Centro. Get in touch with owner by addressing the Desert Magazine, El Centro, California.

DRIVE TO MEXICO CITY—Complete information and suggestions. Send ten cents in stamps to Wilson, Box 87, Barstow, California.

RANCHO LOMA VISTA — Desert Guest Ranch. U. S. 80 highway at Aztec, Arizona. Rates \$2.50 per day.

HAVE YOU MADE YOUR WILL?—Booklet of instructions and Will form blank for One Dollar. Satisfaction or money back. Send dollar to Desert Crafts Shop, 597 State Street, El Centro, California.

DESERT VALLEY RANCH SALE—Ideal for rest haven, scenic resort site, agricultural pursuits. In Kern county, 160 level acres. Two houses, double garage, well, trees, development. Any reasonable offer accepted. HIGBEE RANCH, Cantil, California.

Mines and Mining..

Prescott, Arizona...

Arizona small mine operators in two dozen resolutions adopted at their first summer jamboree here handed out demands, pleas and pledges, praise and condemnation. The state land office is charged with discrimination against mine owners and the small operators demand "exhaustive study of the policies" of that branch of Arizona's government. The jamboree voted opposition to US reciprocal tariffs; attacked workmen's compensation insurance rates as too high; favored government buying and storage of metals from domestic sources; urged continuation of silver buying; condemned "demagogery and class appeal methods" of political candidates and declared war on candidates opposed to mining interests. Amendment of the Wagner act to recognize employers' rights was urged and US bureau of mines was commended for attitude toward small operators.

Carson City, Nevada...

Historic mint, built by the federal government here in the days of the Comstock boom, is for sale. The two-story stone building used as a coin factory until 1893, later saw service as an assay office before it was abandoned. William Arthur Newman of the public building branch of the treasury points out that the mint handled tons of coins, gold pieces frequently dropped through the cracks in the floor. A grizzled miner some years ago panned pay dirt near the building. The structure was built at a cost of more than \$400,000, will probably go "for a song."

Ray, Arizona...

Ray mines division of Nevada Consolidated Copper company reopened August 16 after being shut down two months, reemploying first of more than 600 workers expected to return to their jobs. Reopening of the Hayden, Ariz., concentrator and properties in New Mexico is announced. Improved demand for copper is the reason.

Independence, California...

Stewart Bedell of Big Pine picked up a nine-ounce gold nugget—"the size of a lemon" on his Marble canyon placer gold property. The nugget is on display in a Big Pine store.

Phoenix, Arizona...

Arizona state mine inspectors visited 97 mines during the first six months of 1938, reporting employment of 6,526 workmen in these properties. Copper Queen branch of Phelps-Dodge at Bisbee lists most workers, 1180. Here are a few of the mine names: Big Johnnie, Blue Bird, Cat's Paw, Golden Star, Golden Turkey, Little Daisy, New Year's Gift, Mocking Bird, Pack Rat, Superstition Saga, Yellow Jacket.

Eureka, Nevada...

Forty miles of underground workings in the old Diamond mine, south of here, attract many tourists. Drafts from the 2,000-foot main tunnel open into large natural caves where stalactites and stalagmites are found. The mine is at an altitude of 8,300 feet, was first opened in 1888, according to local records.

Yuma, Arizona...

Emery Blevens and wife have leased gold properties in the Cave creek field of the Plomosa mining district to Drury Butler and associates of Sacramento, Calif., with option to purchase, involving \$50,000. Papers have been filed with Vernon C. Wright, Yuma county recorder. Butler expects to use drag-line and wet placer operations on 880 acres. Water has been developed on the claims, it is reported.

Las Vegas, Nevada...

Three claims and a millsite in the Cimarron district have been acquired by the Silver Divide Mines company on a lease and option from Charles W. Taylor, according to Tonopah reports. Claims are Cimarron 5, 6 and 7 and No. 6 millsite, adjoining holdings of Pacific Butte Mining company. Southern Californians are said to be principal stockholders in Silver Divide.

Goldfield, Nevada...

Nevada's largest placer dredge is being built in Manhattan, says the Reno Evening Gazette, to work several thousand acres of ground controlled by Donald and Cole-Kirchen interests. The dredge is 180 feet long at the waterline and 60 feet wide. A steel superstructure rises 50 feet. With 120 buckets on the line, the machine is designed to treat 5,000 yards of material in 24 hours. Estimated cost is \$900,000 and operations are scheduled to begin in October.

Dove Hunters

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Season opens Sept. 1.
and closes Oct. 15 in
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is your best hunting
ground...

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desert quail, too—season
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--So They Took Pa to Jail

This was the best Hot Air story submitted to the Desert Magazine in the August contest, according to the opinion of the judges, and the \$5.00 prize was awarded to Will Strong of Alhambra, California, who sent in the yarn. With the passing of summer the Hot Air contest will be discontinued for this season.

IT was Pa's idea. Everybody said it was crazy but that didn't stop Pa. It was this way. Uncle Jud of Las Vegas, Nevada, won a big sweepstakes prize and decided on a trip around the world. He asked Pa to take care of the Britannia building until he got back, so Pa leased the mine and we moved into town.

The Britannia was the tallest building in Nevada at that time. It had a flat top roof with a three-foot wall around it. Pa had a lot of rich soil hauled in and carried up to the roof and there he planted a garden. It was the first roof garden in the state.

On the street side he planted climbing beans. They grew to beat the band, right from the start. In less than two weeks they reached the top of the wall and be-

fore Pa had time to put up poles the beans started climbing down the side. Maybe the force of gravity helped some but in six weeks they had spread all over that side.

When they began to bear all you had to do was lean out the window and pick a mess of beans.

"Who's crazy now?" asked Pa.

There was a lot of the beans that couldn't be reached from the windows, and they just kept on growin'.

Then came one of the hottest days ever recorded in Nevada or any other state. The beans ripened up too fast and 'round noon they began to pop. Before night they had broken every window in the bank and postoffice across the street.

The police had to rope off the street for three days and they arrested Pa for interfering with the mails.

RATTLERS DISAPPEAR WHEN HUNGRY CRICKETS MOVE IN

Hungry Mormon crickets are ganging up on rattlesnakes, according to Morley Murphy, Nevada rancher. Morley says he saw massed battalions of crickets drive three rattlers into pits dug by WPA workers, declares the ravenous insects then swarmed over the snakes and devoured the reptiles without leaving a trace of their victims.

LARGEST KIVA IS FOUND BY FIELD MUSEUM MEN

Largest known kiva or temple built by prehistoric Americans has been located in southwestern Colorado by members of a Field Museum expedition, says Dr. Paul S. Martin, leader of the party. Uncovered amid the ruins of an Indian village excavated on the south rim of Cahone canyon, the great circular slab structure is 81 feet in diameter. Nearby were found living quarters, rows of masonry-walled rooms commanding a wide sweep of the canyon. Subterranean houses had been hewn out of rock. In the larger rooms there were hearths and nooks for domestic necessities.

BUZZ HOLMSTROM STARTS SECOND TRIP DOWN RIVER

Buzz Holmstrom is at it again. This young Oregon filling station operator, only man to make a boat trip alone down the Colorado to Boulder dam, is on the river now with one companion, Amos Berg, their destination the Gulf of California, 1200 long, hard miles from their starting point on the headwaters of the Green river in the Wind mountains 150 miles north of the town of Green River.

STING OF SCORPION NOT SERIOUS, SAYS AUTHORITY

Sting of a scorpion is immediately painful, no worse than that of a wasp, and the effect passes in about half an hour. Tarantulas are not so aggressive as scorpions, the bite of a large lady tarantula is about equal to the jab of a dull pin and is not dangerously poisonous. These findings are pointed out by A. D. Shannel, Riverside, California, investigator as pertinent and comforting to desert habitants and sojourners.

WORK STARTED ON UTAH DINOSAUR EXHIBIT

Dr. Barnum Brown, tops in the world of dinosaur hunters, has taken a staff of technicians to Dinosaur national monument to chisel out a bas-relief of gigantic bones on the face of a cliff 40 feet high and 400 feet long. Release of \$37,698 federal funds permits continued work at the site. Two prehistoric skeletons have been removed, but Prof. A. C. Boyle, superintendent of the monument, says there are probably hundreds of thousands of fossils in the area. Presidential proclamation adds 203,965 acres to the monument, in Uintah county, Utah and Moffat county, Colorado. Grazing, irrigation and power rights are not affected by the increase in size.

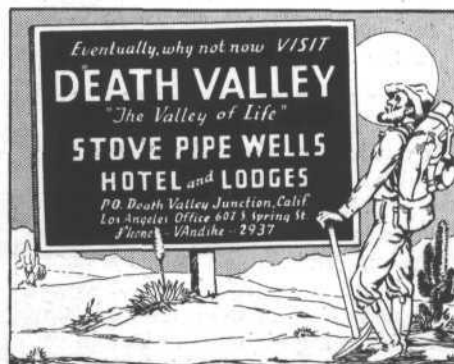
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Sez Hard Rock Shorty of Death Valley

By LON GARRISON



"I've heard it said," began Hard Rock Shorty, "that a man can only jump as far as he is long. Now, I ain't wantin' to call nobody a liar, but when my own experience tells me that I can hop about four times as far as I am tall, an' this from a standin' start, why then I just got to disagree with the aforementioned statement."

Hard Rock spat reflectively over the rail of the store porch, estimated the lasting qualities of the shade and then leaned back comfortably in the creaky old chair.

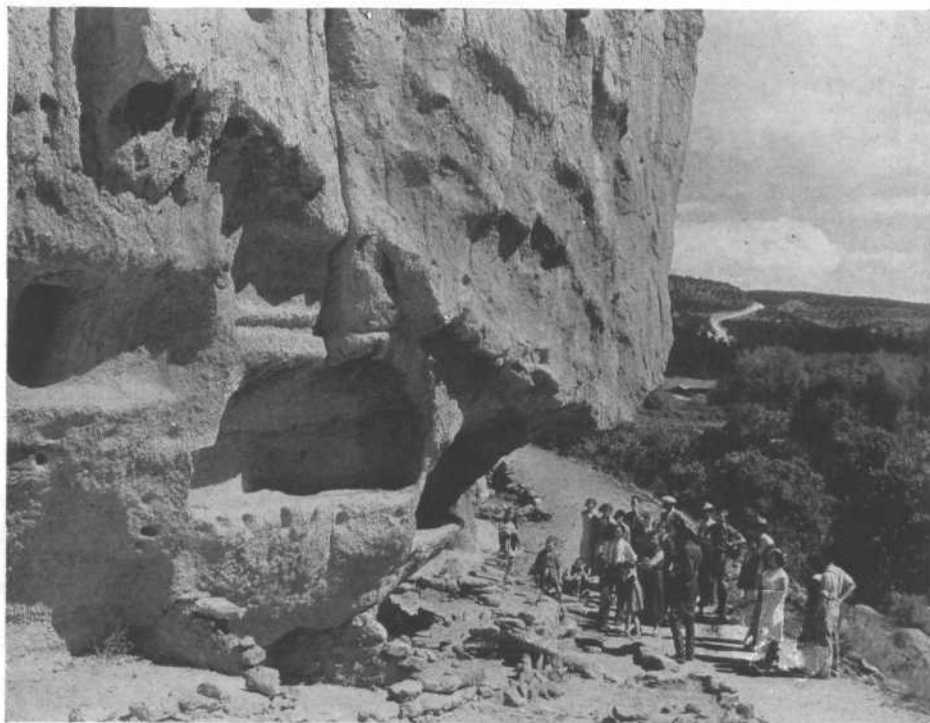
"I was out prospectin' one day in Dry Gulch, here a year or two ago. I was workin' along the edge o' the gulch, tryin' to foller up a little color that seemed to peter out in the crick just at that spot, an' I was up on the rim o' this barranca which same was all o' 14 foot wide. I was leanin' over, backed up against a big high rock, when all of a sudden a whoppin' big rattler let go right about opposite my hip pocket. I straightened up with a jerk. There just wasn't no place to go. The walls o' the gully dropped off ahead o' me about 20 foot straight down an' the crick bottom was rough enough to bust all my legs. I couldn't get out to the sides, an' I couldn't back up.

"I didn't have long to figger on it, neither. That snake let out another rattle right under me, an' there was only one thing to do—try to jump the gulch. The snake let go again, givin' me a good start, an' the way I hopped would o' made a kangaroo jealous. I riz up an' sailed like an eagle right out across the gulch—over—over—almost over—was I goin' to make it? With about two foot to go, I seen I just didn't have the push to do it.

"So, I turned around an' went back. Lit ker-smack right on that snake, an' squashed 'im flatter'n one o' the preacher's jokes."

Bandelier Monument

Fletcher A. Carr of Lemon Grove, California, is the winner of the \$5.00 cash prize offered by the Desert Magazine for the best letter identifying and describing the landmark below, photographed in Rito de los Frijoles, 50 miles west of Santa Fe.



By FLETCHER A. CARR
Lemon Grove, California

The landmark pictured in the August issue of the Desert Magazine is located on the Rito de los Frijoles in the Bandelier national monument about 50 miles west, by road, of Santa Fe. The photograph shows three cavate or cliff-room dwellings which were constructed in the eroded hollows of the volcanic tuff cliffs so common to this region.

Bandelier national monument, in the heart of the Pajarito plateau, lies at an elevation of approximately 7,000 feet above sea level and is covered with coniferous trees. It was named for that intrepid explorer, Adolph F. Bandelier, who made extensive archaeological surveys in the southwest during the early 1880's. This extremely interesting monument is easily reached by automobile from Santa Fe, by turning west from U. S. Highway 285 at Pojuaque and following a well surfaced road the remaining 30 miles over the beautiful Pajarito plateau. A section of both the

road and plateau can be seen in the background of the photograph.

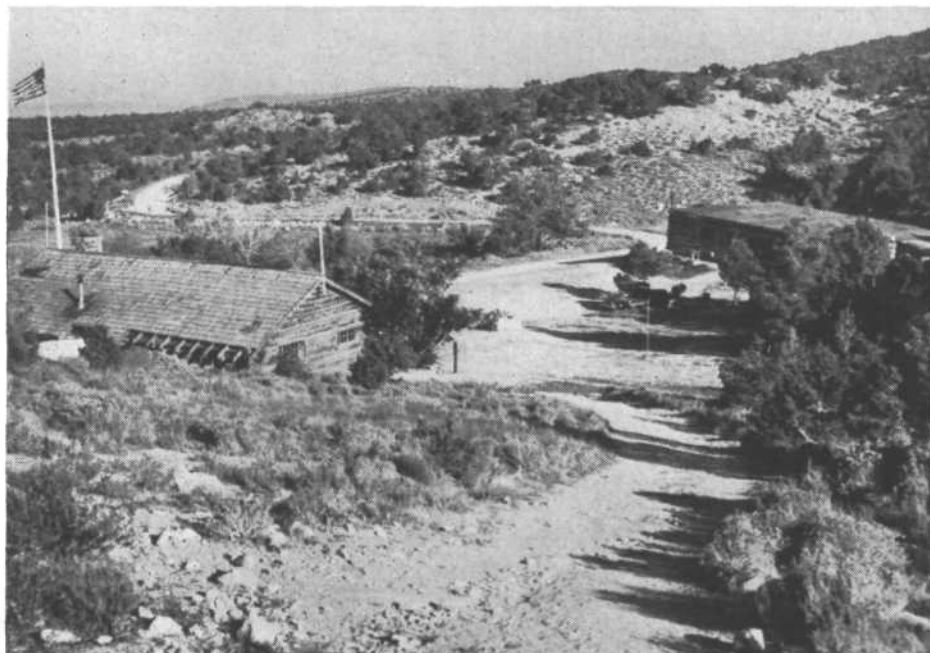
The cavate dwellings were occupied by prehistoric Indians of the upper Rio Grande drainage during the 14th and 15th centuries A. D. Holes that had weathered out of the cliff walls were closed up, except for small entryways, by using poles and clay mortar or stone blocks and mud plaster. Several post holes can be seen along the lower margin of the hollow to the left of the group of people.

In addition to the cavate dwellings, there is a large pueblo ruin, Tyuonyi, located on the talus slope beneath the cliffs and a spacious ceremonial cave a short distance from the point in the photograph.

The national government welcomes all tourists to this scenic spot with the wholehearted hospitality that is so characteristic at all of its monuments. Adequate camping facilities are available for anyone desiring to spend a few leisure days in the region.

THIS PICTURE TAKEN IN NEVADA

Who can name and describe this place?



FOR THE BEST ANSWER —A PRIZE OF \$5.00

Every month the Desert Magazine pays \$5.00 to one of its readers for the best letter identifying and describing a well known landmark in one of the states within the desert area.

This month the "mystery picture" was taken in Nevada. The landscape shown in the photograph above is seen by hundreds of motor travelers every year. The buildings should be easily identified by those who have visited this scenic spot.

Since this picture was taken a year ago substantial changes have been made in

the trail shown in the foreground, but the general landscape remains the same.

For the best manuscript of not over 400 words identifying the place shown in the picture, giving its location and accessibility, and describing the scenic attractions at this point, the Desert Magazine will pay a cash award of \$5.00.

This contest is open to all readers of the magazine and entries should be addressed to Landmark department, Desert Magazine, El Centro, California.

The contest closes on the evening of October 20, and the winning answer will be published in the December number of this magazine.

Tropics in Your Yard

Continued from page 13

Montana), arbor vitae, Callistemon rigidus (bottle brush), Buddleia alternifolia (summer lilac), Catalina cherry, Coton-easter parneyi, Crape myrtle, Gardenia veitchi, Grevillea robusta, Guava, Hibiscus brillante, juniper, Leptospermum (Australian tea tree), Myrtle, Nandina domestica (bamboo), Privet japonica, Pyracantha lalandi, Pittosporum tobira, Plumbago capensis, and Viburnum.

The leader in vines is grape. But fruitless vines serve better in their special places. Try Bignonia tweedianna, Boston ivy, Ficus repens, jasmine, Tecoma capensis, and Virginia creeper.

There are several dozen annual flowering plants which help to complete a garden but are not necessarily part of a tropi-

cal theme. Some of the favorites include: African daisy, Begonia, Delphinium, pansy, Petunia, snapdragon, Santolina, and verbenas.

The visit to Archias' back yard made me want to rush out and get a truck load of plants, borrow the neighbor's shovel, and dig holes in my own measured ground. But on second thought I am convinced I do not have the patience to properly finish the job. Assuming this weakness is an American characteristic, it is easy to understand why there are few gardens like that at 311 J street, Brawley.

The desert has many cactus fans and to espouse openly the case of the tropical gardener would be to invite thorns of abuse upon my head. But fresh from the spell of an evening in the Archias glade, I am eager to present "J. C.'s" side of the story, for his yard is attractive, useful, and livable.

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OBSCURE TRAILS REVEAL FASCINATION OF THE DESERT

IN CALIFORNIA DESERT TRAILS, J. Smeaton Chase created a classic of desert literature. Published in 1919 by Houghton Mifflin company, two decades of readers have found the volume an authoritative and adventurous introduction to the Colorado desert.

Chase writes without pretense or formality. While he recreates the scenes, sounds, colors, and even the moods of the desert in terms that are entertaining and colorful, he is always faithful to the land and the people he seeks to portray.

Starting south from San Jacinto mountain at the end of May, Chase followed prospectors' trails, Indian trails, and rabbit trails, through numerous palm canyons skirting the west rim of the Colorado desert, to oases and water holes, up to Warner's and Vallecito, down through the badlands and across Imperial valley to Yuma. He followed the Colorado river up to the Palo Verde valley, then traveled through the heart of the Chuckawallas back to his starting point. Mesquite had originally been one of the party, but the luxury-loving burro rebelled before he had gone far from Palm Springs. The Indian saddle horse Kaweah became his companion during the remainder of the journey.

Each canyon, each water hole — every point in his journey is made memorable by the association of legends and tales, the contrast of the seasons, the local color. Chase disclaims being a scientist but in his fine exposition of plant relation to its environment, his accurate observance of desert animals, his references to geology and history, he shows himself a close observer and an eager student of nature.

He confesses at the beginning that he has fallen completely under the desert's spell. "It is the desert as desert—God's desert, not man's—that engaged my interest, and that . . . seems to me the most memorable, in its totality of impressiveness, of all natural objects that I have met." The paradox is that the desert is the opposite to all we ordinarily find pleasant, yet its spell is deeper and more enduring than that of any other geographical region. Chase believes this is partly due to the fact that man, rarely steadfast in his attitude toward nature, changes into reverse to the spirit of the times. Thus, ease and luxurious living have brought about a zest for things stark, repellent. Another key to the attraction has been recognized by many desert so-

journers—"It disembodies us, takes away what hides us from ourselves." A broader explanation which he gives is the metaphysical one: "Space, solitude, quiet—our minds at their best are tuned to these, and when they find them they expand, like the anemone welcoming its native tide."

The hardships of storms, wind, pests, heat are not minimized, but even the most immune reader will have to confess that he has fallen under the inexplicable charm of the "dreamy, dreary desert."

LUCILE HARRIS.

. . .

CLOSE TO THE HEARTS OF SOUTHWESTERN INDIANS

Just about this time every year I take down from the book shelf and read again Charles F. Lummis' *MESA, CANON AND PUEBLO*, published by The Century company, 1925. It always inspires me with a wild desire to drop everything and rush off to Arizona.

There is something so frank and easy about Mr. Lummis' work that it not only is highly informative but extremely interesting. While we may at times be inclined to disagree with him, as when he infers that the mirage is limited to the desert places, one must admire his courage and power of observation.

Mr. Lummis was considered a "bit queer" by some of his neighbors, but that generally is the way the world looks upon one who has the will to do and live as he sees fit regardless of conventions. The fact that he was invited and urged to become a member of one of the most reticent Indian tribes, whose distrust of the "civilized races" had become almost a religion among them, speaks worlds for the real character of the man.

The hundred or more photographs taken by Mr. Vroman and others lend added charm to the book. Some of these photos are extremely rare. Of course, many changes have taken place on the desert and among its people since Mr. Lummis' book was written, but the essentials are still the same, for on the desert Time knows no limitation.

There are descriptive chapters on the Grand Canyon, the Petrified Forest, the Snake dance, the Lava rivers—written so well that it becomes difficult for one to remain at home.

TRACY M. SCOTT.



DESERT SOLACE

BY LUELLA CLEWELL
Wichita, Kansas

When the world presses
With burdens dreary,
The desert caresses
The mind made weary.

THE LIZARD'S PLAN

BY MARY E. PERDEW
Santa Ana, California

A traveler through a desert town,
Stopped off to talk to Old Bill Brown,
A desert rat of some renown.
"Oh Mister: Could you tell me, please,
How can such little beasts as these,
Upon the burning desert sands
Run to and fro, with seeming ease.
I can't see how they do it so.
It burns them, surely where they go."
Old Bill made answer, "Oh yes, Ma-am,
It would, but they have got a plan.
They're mighty smart; there ain't a doubt,
The lizards and the horny toads,
They sure have got it figgered out.
In these here days when it's so hot,
And there just ain't no nice cool spot;
When he goes travelin' there and back,
The little varmint has a stick,
He takes it with him on his back,
And when he gets too dad-burned hot
He climbs up on the stick to set.
He takes a durned good rest, you bet.
And that explains in all this heat
Why there's no blisters on his feet."

Photo, courtesy U. S. Bureau of Reclamation

The Desert Waits

BY A. V. STORER
Pomona, California

Dedicated to Ragsdale of Desert Center

Far flung, as nature's waste, despised,
Cast free from care and man,
The desert waits and silent keeps
Its purpose in that plan
Which checks conceit and waiting yet,
Spread far and near
In solemn abject humbleness,
Calls reverent thought to prayer.

Here too, to show the love of that
Great compensating Mind,
The desert waits, as eventide
Leaves blistering glare behind,
And bathes hues beyond compare,
As token to the sons of men,
That love still nestles there.

Just so, as ages come and ages go,
Grasping or reconciled,
The desert waits, as stern as any foe,
Yet lovely as a child;
In moods flung wide from heaven's dawn
To depths of hades' gates;
Outcast, companion of our hopes,
Until He calls, the desert waits.

A RATTLESNAKE

BY THELMA IRELAND
McGill, Nevada

A slinky, ugly rattlesnake
Slithering through the brush.
Its rattle sounds a warning
Followed by a general hush.
But, what can be the use of him—
Just causing folk to faint?
Perhaps it's just another thing
To make us glad we ain't.

• • •

SANDIA MOUNTAINS

BY MILDRED E. CHRISTIE
Albuquerque, New Mexico

Glorious Sandias! grey at morning's flush,
Or shrouded in a filmy shawl
Of snowy clouds. At evening's blush
An old rose gown she wears.

When storm clouds lower in the east
They rise a grim and fearful mass
Amid the lightning's flash; a feast
Of splendor to the eye.

Her winter gown of white is best,
Illumined by the sunshine bright,
In majesty her form caressed,
And queenly graciousness.

So whether robed in white or blue,
Or purple, grey or rose,
I'll watch to see the shifting hue
With solemn awe and praise.

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**MENTION DESERT MAGAZINE
WHEN ANSWERING ADVERTISERS**

Here and There

... ON THE DESERT

ARIZONA

Tucson ...

Strict control of mesquite on southern Arizona grassland ranges is recommended by Dr. R. B. Streets, plant pathologist and E. B. Stanley, chief of animal husbandry at the university of Arizona. Spread of the mesquite is a detriment to grazing on southwestern ranges, these scientists declare, and the problem is of prime importance. Removal of mesquite increases cattle carrying capacity of the range from two and a half to three times, tests in Texas revealed. Objections are two-fold: the tree competes with forage grasses and it is difficult to work cattle in mesquite thickets. Eradication is opposed because mesquite leaves in spring make succulent forage, its beans are palatable, it is used for fuel and fence posts and it provides protection to cattle from sun and storm. Control recommended is application of sodium arsenate to sapwood. Cutting is not effective. Stumps sprout immediately, make dense clumps.

Window Rock ...

Political machinery of the paleface has been adopted by the Navajos. Indians who held nominating primaries in 18 reservation districts on August 16 will vote by secret ballot on September 24 for members of the tribal council. Having no generally understood written language, the Indian voters will use colored ballots, a different color for each candidate. Color blind voters will be out of luck. White man's politics pops up in a letter from Chee Dodge, patriarch of the Navajo chieftains, to Indian Commissioner John Collier. The venerable chief declares the federal government's rehabilitation program "means financial ruin for the Indian" and asks bluntly, "What are you going to do about it?"

Phoenix ...

Procurement office of the national park service at Phoenix has been transferred to Santa Fe, N. M., despite protests of Arizona business men. Purchases for Arizona park divisions at Phoenix, Tucson and Kingman are affected.

Flagstaff ...

Coconino county's J. D. Walkup, chairman of the board of supervisors, is fed up on national monuments. Fighting a proposal to designate the Sycamore canyon region, near Williams, as a federal reserve, Walkup went to Phoenix to kick to the governor. Said Walkup: "Coconino already is owned 90 per cent by the federal government. If this keeps up we might as well give all to the government and let it pay the cost of our local government." Meantime Frank Pinkley, southwestern monuments superintendent, is investigating, after receiving a request from Senator Carl Hayden to look into the canyon.

Window Rock ...

If you hear strange noises coming from your radio, maybe you're tuned in on the new station at the Navajo Indian central agency here. Broadcasting is in the Navajo language, for the benefit of 50,000 hogan dwellers on the 16,000,000-acre reservation.

Tucson ...

Lightning bugs with their tail lights on behind carry dimmers, compared to the Cuban click beetle's illumination. Found in the Santa Rosa mountains by Jack Wilson of the Tucson chamber of commerce, this rare insect, dark brown and about an inch long, is said to cast an eight-inch circle so bright you can read a newspaper by it. Dr. Lawrence P. Wehrle, assistant professor of entomology of the university of Arizona, says Jack's find is the first of its kind near Tucson.

CALIFORNIA

Blythe ...

Water storage in the lake behind Parker dam will be increased after October 1 and will reach its maximum 30 days later, according to reports received at Palo Verde irrigation district headquarters here. The lake will extend from the dam to within a few miles of Needles. Silt content in Colorado river water at Blythe intake late in August amounted to only 1/40 of one per cent by wet volume. Cut in dredging costs of the Palo Verde district is forecast by Manager C. P. Mahoney.

Mojave ...

Westways highway association has been organized to promote a new transcontinental route touching points of interest in national parks. From Las Vegas tourists will be urged to go across the desert through Barstow, Mojave, Tehachapi, Bakersfield and Famoso, turning west to Morro bay. Stanley Abel, Kern county supervisor, is president of the association. An advertising program will emphasize scenic wonders of Westways highway.

Barstow ...

John William Brown, 69, construction engineer who built first railroad lines into Death valley, was buried in Compton in August. Over this road first loads of borax were hauled after famous 20-mule teams were discarded. His name is linked with building of other western rail lines, his record included service with SP in Mexico during revolutionary days. Surviving members of his family are his widow and two daughters.

Brawley ...

First of three big diesel engines and generators, to treble capacity of the Imperial Irrigation district power plant here, is being assembled and delivery of electricity to a valleywide system under public ownership is scheduled for October 15. Service will be given to patrons on 600 miles of rural lines and to seven incorporated cities.

Independence ...

From pens of the Rainbow club of Bishop 17 ring-neck pheasants 14 weeks old were released to fare for themselves in Owens valley first week in August. Two pens were taken to Round valley, four to Bishop, two to Independence and two to Lone Pine. Shipment of 200 pheasants from Napa game farm will be liberated in this area in September.

Barstow . . .

Fourth archer in the world to shoot an arrow with a foot bow a distance of more than 500 yards is Kenneth Wilhelm of this city. At the National archery association meet in San Francisco Kenneth sped his arrow 533 yards. Then with an arrow he hit a cork perched on Reuben Neilson's thumb, shot a dime from between Reuben's fingers. He wanted to shoot an apple on Reuben's head, but regulations prohibited this duplication of William Tell's stunt. To shoot a foot bow the archer sits down, pushes against the bow with his feet as he draws the bowstring, exerting more than 200 pounds pressure. The foot bowman wears leather breeches. He needs them when he slides along the ground after the arrow is released.

NEVADA.

Boulder City . . .

Mr. and Mrs. America continue to flock in growing numbers to Boulder dam recreational area. Tourist travel to Yellowstone and Tahoe showed a slump in July, but national park service reports an increase in visitors to the Boulder area for the month, as compared with July 1937. In 21,583 cars 70,419 persons journeyed to see the sights at the world's biggest dam during the 31 days of July 1938. This upped the total 5.9 per cent from the 1937 record for the same period.

Lovelock . . .

James Scossa, "well known and successful prospector," is credited with discovery of hosts of horned toads in places on the Nevada desert. One newspaper says, "In driving up toward his mine at Happy Creek, James reports thousands of the small red and grey animals could be seen hopping along ahead." Maybe Scossa saw another creature. Horned toads don't hop. They're lizards and they walk or run.

Lehman caves monument . . .

True source of old song, "I'm Forever Blowing Bubbles," has been located. A bubble-blowing stalactite, tinkling when the bubbles burst, is the novel find made here by T. O. Thatcher of the national park service. Discovery is reported officially at Washington. In a section of the caves known as Cypress swamp, Thatcher heard a musical sequence of tinkles. He traced origin of the sound to a small stalactite, decided water and air, forced through the hollow core of the formation, are responsible for the phenomenon.

Las Vegas . . .

Guaymas bound, Paul Thompson, Tucson rancher and Hubert Merriweather, Arizona U. student, shoved off from Boulder dam and rowed away in a canvas boat down the Colorado river. Their craft weighs 55 pounds and they will detour with portages when they arrive at Parker and Imperial dams on the lower river. The trip to the Sonoran port on the Gulf of California is described as a vacation cruise.

Winnemucca . . .

Rainfall records for 25 years toppled when Meteorologist L. A. Staples reported total precipitation of 1.15 inches here during the month of July 1938. Only once before in the history of the weather bureau, dating to 1871, was this figure topped. In July 1913 Winnemucca had 1.55 inches of rain. Winnemuccans complained when the mercury hit 101 on July 23 and 24, this year. Month's low temperature was 43 degrees on July 3.

NEW MEXICO

Deming . . .

Southwest New Mexico Power association has been organized here by representatives of four communities in the territory to be served by the hydro-electric power plant at Elephant Butte dam on the Rio Grande. Hatch, Silver City, Lordsburg and Deming are charter members, Hillsboro, Hot Springs, Kingston and Las Cruces are expected to join. Allocation of power will be requested in applications to US reclamation service. Cheaper rates and increased use of electricity are expectations.

Santa Fe . . .

New Mexico tourist bureau is placing elaborate signs directing tourists to Fort Wingate, El Morro, Kit Carson's cave, Blue-water lake, San Felipe church in Old Albuquerque and the Ice caves. Signs will be put up for Alamogordo lake near Fort Sumner, scene of Villa's raid on Columbus, Zuni pueblo, Brazito battlefield. El Camino Real Santa Fe Trail and Eagle Nest lake. Others, too numerous to mention, are on a long list.

Santa Fe . . .

Anxious appeal for cash saved the day for the Coronado Cuarto Centennial exposition, when the state finance board put up \$1250 to carry on the preliminary work for the celebration scheduled for 1940. Dr. James Zimmerman, president of New Mexico university, said the legislature will be asked to provide funds, but money ran out before the legislature convened.

Albuquerque . . .

Instruments are being installed in New Mexico and other western states for gathering snowfall data at altitudes of 7000 feet or higher, weather bureau officials here announce. Information thus gained is valuable to municipalities, irrigation districts and all others dependent on water supply. Thirteen snow gauging stations were operated in New Mexico in the winter of 1937-38, in cooperation with the forest service. Thirty-five more stations will be set up this year, six of them in Arizona, four in New Mexico.

Silver City . . .

Indian bureau officials say there is "every reason to believe" a rich oil strike is imminent on the 750,000 acres belonging to the Jicarilla Apaches. Seven hundred and fifty tribesmen voted to assign all rights to the tribe, opposed individual apportionment. These New Mexican red men may be in line for oil fortunes rivaling wealth of Oklahoma tribes.

UTAH

Mexican Hat . . .

Annual romance roundup of Navajo Indians was held in mid-August at Goulding's trading post in Monument valley, scenic high spot described in the Desert Magazine July 1938. From isolated villages came participants in the annual squaw dance at which young women of the tribe have a chance to select their mates.

Moab . . .

Four "new" arches have been discovered recently in Arches national monument, reports Ranger Reed. Two of them are in the Yellow Cat district, two in the present boundaries of the reserve. Listed officially now are 48 arches, 35 feet or more in length and 21 smaller. Following a series of floods in Courthouse wash which stopped traffic, the road has been repaired by CCC workers and state road crews. In July there were 186 visitors.

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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933.

Of the Desert Magazine, published monthly at El Centro, California for October 1, 1938.
STATE OF CALIFORNIA) ss.

COUNTY OF IMPERIAL

Before me, a notary public in and for the State and county aforesaid, personally appeared J. Wilson McKenney, who, having been duly sworn according to law, deposes and says that he is the business manager of the Desert Magazine and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are:

Publisher, The Desert Publishing Co., El Centro, California.

Editor, Randall Henderson, El Centro, California.

Managing Editor, (none)

Business Manager, J. Wilson McKenney, El Centro, California.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

Randall Henderson, El Centro, California.

Tazewell H. Lamb, El Centro, California.

J. Wilson McKenney, El Centro, California.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

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4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is (blank) (This information is required from daily publications only.)

J. WILSON MCKENNEY,

Business Manager.

Sworn to and subscribed before me this 18th day of August, 1938.

(SEAL)

HERBERT LOWDERMILK.

My commission expires August 4, 1943.

DESERT PLACE NAMES

Compiled by TRACY M. SCOTT

For the historical data contained in this department, the Desert Magazine is indebted to the research work done by Miss Scott; to the late Will C. Barnes, author of "Arizona Place Names"; to Frances Rosser Brown of New Mexico and to Hugh O'Neil of Ogden Utah.

ARIZONA

BLOODY TANKS

Gila county
At head of wash bearing same name. So called from fight there in winter of 1863-64 between whites and Maricopa Indians on one side and Apaches on the other. King Woolsey was captain. Encounter also known as the "Pinole Treaty" because Woolsey before the fight offered the Apaches a feast of pinole as a token of friendship. Emory says pinole is heart of Apache corn, baked, ground and mixed with brown sugar. It has been stated often that Woolsey put strychnine in the food. Bancroft called the fight "an outrageous massacre, the Indians being coaxed to the feast and nearly all slaughtered by Woolsey's party." Peeples, who was present, denies this.

FORT BOWIE

Cochise county
In Apache pass, north end Chiricahua mountains. One of earliest military posts in Arizona. Named for Col. George W. Bowie, Fifth California Infantry volunteers. Many Indian fights took place here and it was one of the most dangerous and dreaded parts of the stage road. Bourke says: "Fort Bowie with its gruesome graveyard filled with such inscriptions as 'Killed by Apaches,' 'Met his death at the hands of Apaches,' and 'Tortured to death by Apaches.' One visit to that graveyard was guaranteed to furnish the most callous with nightmares for a month."

ELOY

Pinal county
Station on SPRR about 6 miles west of Picacho. Mrs. M. M. Fordham, president of the Woman's club at Eloy, wrote: "In the year 1902 the Southern Pacific built a switch here, naming it Eloi, a word taken from the Syrian language, meaning 'My God.' It was soon called Eloy after the Spanish pronunciation. In 1916 a couple of men came from California, laid out a town site, promoted the planting of cotton and renamed the town Cotton City. The SP would not accept the new name and carried all mail for Cotton City on through. After many disputes and some litigation the town became Eloy for good."

CALIFORNIA

HARPER'S WELL

Riverside county
Originally called San Sebastian del Peregrino by De Anza in honor of his Indian guide Sebastian Tarabel. Later water hole and surrounding land were claimed by a settler named Harper.

OWENS river, valley, lake

Inyo county
Named by John C. Fremont in honor of Richard Owens, who first met Fremont on the Oregon trail in 1845. Later Owens was an officer in the California army. Fremont and Owens led parties to Walker lake November 23, 1845. Indians called the river Wa-ko-pee or Wau-co-ba.

PALOMAR Mountain (pah loh mar')

San Diego county
Ele. 6128. In San Jacinto range. Sp. "dove-cote"; may also mean "mountain overlooking the sea." Site of new 200-inch telescope. Formerly called Smith mountain, one author says this name came from a man named Smith, who was an early settler on the mountain.

ANDRADE

Imperial county
From General Guillermo Andrade who owned most of the land in Mexico through which the canal to irrigate Imperial valley was, at its inception, proposed to run. He also owned much of the district around Blythe. He died in Mexico City in 1905. His son, A. F. Andrade, later was agent for the California Development company. At Andrade are present headworks for the Imperial Irrigation district, but the intake from the Colorado river will be transferred soon to Imperial dam, upstream above Yuma on the All-American canal.

UTAH

WINSHIP

Summit county
Founded 1880 and named for a highly respected Indian chief.

PIUTE (pi'yute)

county
From the Indian tribe. Pah is "water." Pah-Ute "The Ute Indians that live near water." Various spellings of the word, this publication preferring Pahute.

JUAB (You'ab)

county
Indian-Spanish word meaning "flat lands."

YAMPA PLATEAU (yahm'pah)

Uinta county
Ute Indian word. In one dialect means "bear," in another dialect "plant," Austin says.

ABAJO peak (ah bah ho)

San Juan county
Ele. 11,445. Sp. means literally "under"; hence the lower peak.

NEW MEXICO

ALGODONES (ahl go do' nays)

Sandoval county
Sp. for "cotton fields."

BERNALILLO (ber nah lee' oh)

county
Literally "little Bernard," Sp. proper name. Several Spanish officials by this name are mentioned in early accounts.

CHUSCA mountains (choos'kah)

McKinley county
Sp. meaning literally "pleasant, happy, merry."

CASA SALAZAR (cah'sa sahl ah zahr)

Sandoval county
Literally "the house of Salazar." There were several Salazars during the Spanish regime; all army men.

CUBERO (koo bay' roe)

Valencia county
Named for Pedro Rodriguez Cubero, Spanish governor of New Mexico, 1697-1703.

NEVADA

DESATOYA Range (des a toy'ah)

Churchill county
Pahute word meaning "big black mountain."

HUMBOLDT lake, mountains, river, marsh

Named for Alexander von Humboldt, scientist and explorer, founder of University of Berlin. River named first by Fremont in 1844.

WASHOE mountains (wash oh)

Storey county
Washoe Indian word, originally "wassou," meaning "tall native bunch grass"; may also be from Indian word "yassow," meaning "field mouse." Town founded in 1860-61.

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BY RANDALL HENDERSON

I am indebted to Richard Van Valkenburgh, ethnologist in the Indian Service, for one of the most interesting experiences in a two-week vacation in Arizona and New Mexico.

One afternoon late in August Van invited me to go with him to visit his friend Ayoo'anlh nezi, a Navajo medicine man whose summer hogan is deep in the cool pine forest which covers the higher elevations of the Navajo reservation in northeastern Arizona.

My companion received a friendly welcome at the hogan. His friendship for the Indians is genuine—and the Navajos sense it. I can understand his liking for these nomadic tribesmen. Their hospitality was reserved, but none the less sincere.

During the 24 hours we were at the camp I got an intimate picture of the daily life of Ayoo'anlh nezi and his wife and two children, from the butchering of a sheep to provide barbecued mutton for the evening meal to the weaving of the rug that later would be taken to the trader to exchange for sugar and flour and cotton goods.

White parents would marvel at the industry and obedience of these Navajo children. One of the reasons for this discipline is the gentle manner in which the Indians address each other. During the time I was at the hogan I never heard a voice raised in impatience or command—not even when a battle-scarred old rooster annoyed the 11-year-old girl with his persistent efforts to rush in and grab a bit of dough from the pan in which she was making bread. She shooed him away with a soft-spoken Navajo word that I would have taken for an expression of endearment under any other circumstances.

The little girl—I would not attempt to spell her Navajo name—had a new experience that evening, and so did I. There was a box of marshmallows in my grub kit and I taught her to toast them over the campfire on the end of a stick. She accepted the first one gingerly—but after tasting the candy her eyes twinkled with enjoyment.

* * *

At the Hopi snake dance at Shongopavi I saw a young member of the Snake clan—he could not have been more than 10 years old—bitten by a rattlesnake as he performed his part of the ritual with the reptile in his mouth. The spectators shuddered as they saw the rattler sink its fangs in his hand. The Indian lad never flinched.

The Hopi guard carefully the secret of their immunity to snake venom. Various theories have been advanced by white observers. One of my friends who has witnessed many of the ceremonies and knows the Hopi as well perhaps as any white person, believes they immunize themselves with injections of the serum over a period of time preceding the dance. Another theory is that the snakes are "milked" of their poison just before the dance.

Of the 22 clansmen who handled the thirty-odd snakes in the dance nearly half of them were boys under 12 years of age. The Hopi take their religion seriously. If white folks

had as much faith in their God as do these Indians in their tribal deities the world would be at peace.

The Hopi depend for their food on a rainfall of only eight inches a year. As dry land farmers I believe they are the world's best. They grow corn and beans on a desert which any other farmer would regard as only fit for sagebrush and lizards.

* * *

Without doubt the most gorgeous Indian ceremonial program held in America each year is the three-day inter-tribal spectacle arranged by M. L. Woodard and his associates of the Gallup, New Mexico, chamber of commerce.

Tribesmen from all over the Southwest take part in the festival. Some of the Indians appeared to enjoy the glamour of the show. Others evidently were bored by it. If I had been one of the judges I would have awarded first prize in the parade to the 15 Zuni women who marched down the street single file with beautifully decorated water jars balanced on their heads.

Perhaps we should borrow this balancing art from the Zuni and make it compulsory in all American schools. It develops poise and grace. A young lady with stooped shoulders and a sloppy carriage would have a dreadful time keeping a jar on her head.

* * *

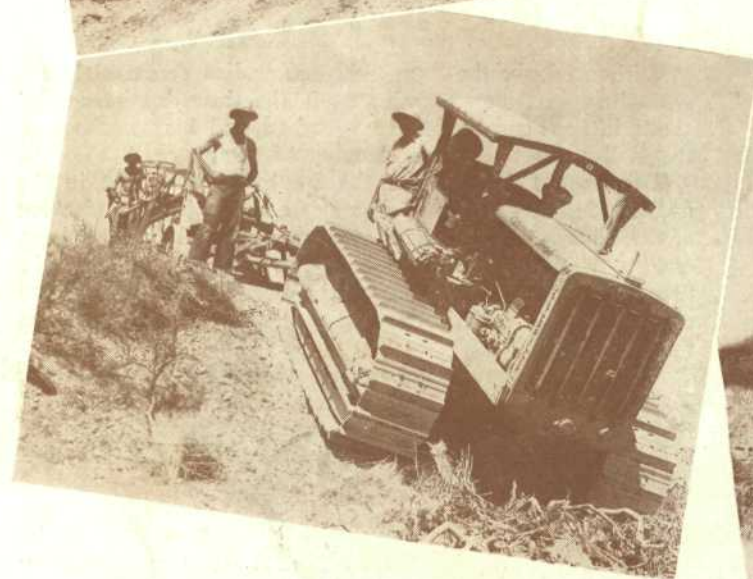
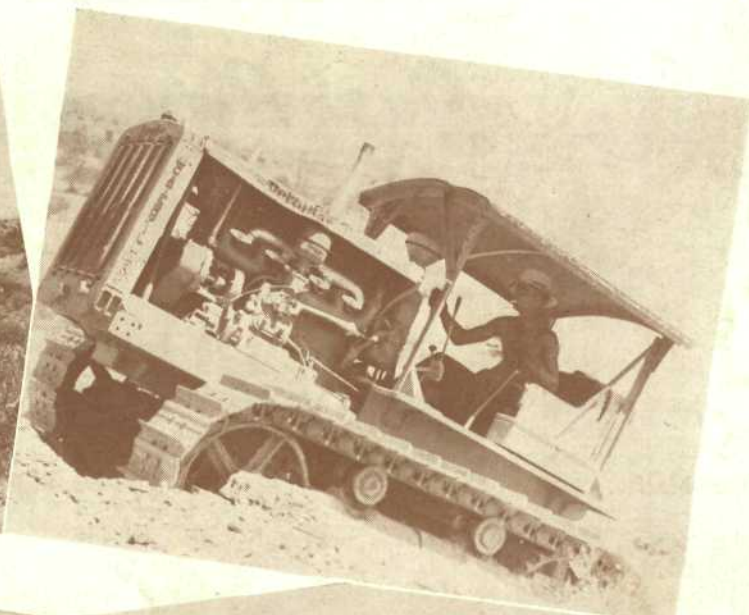
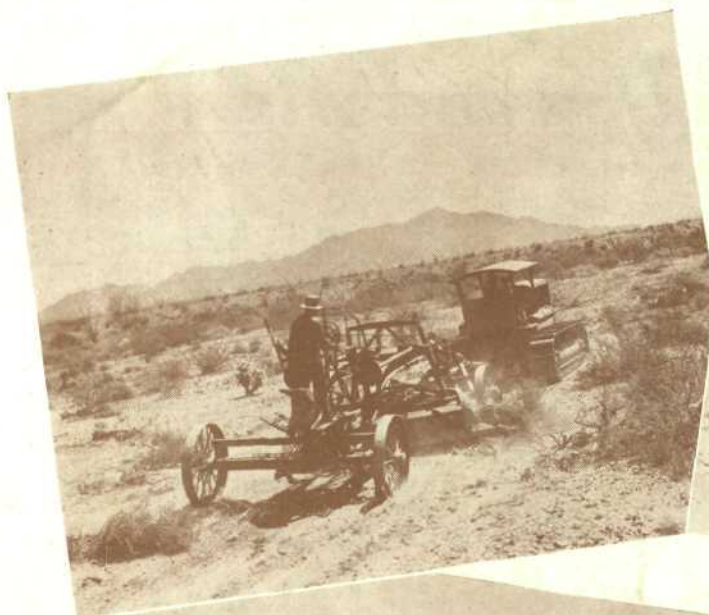
I believe the most courteous people on Uncle Sam's payroll are the rangers on duty at the national parks and monuments. I met several of them on this trip—Frank Pinkley, superintendent of Southwestern Monuments, at Casa Grande; M. R. Tillotson at Grand Canyon, White Mountain Smith at Petrified Forest, Johnwill Faris at Canyon de Chelly, David Jones, who lives in one of the restored rooms of the old Indian dwellings at Wupatki monument, and Carol Miller at Aztec ruins—these and many of the rangers who serve under them.

It is a refreshing experience to get away from the world of war and crime and petty personal strife and spend a few days with the men who are custodians of the great outdoor playgrounds. This is a grand old world after all, when you go to places not disturbed by human greed and ignorance.

The day I visited the Petrified Forest, Ranger Reg Brown caught a trio of motor tourists trying to leave the monument with some fine large specimens of agatized wood they had picked up on the public reserve.

When he told them in his polite southern accent it was against the rules they mistook his courtesy for weakness and tried to bully him. And then they learned their mistake—and in the end they puffed back up the hill and deposited their souvenirs in the exact spot from which they had been stolen.

If the Democrats and Republicans don't figure out how to run this country very soon, I am in favor of rounding up all the politicians and putting them in a corral at the north pole, and turning the government over to the park rangers.



'Caterpillar' Changes the Desert's Face

With a wide-throated roar, a D-7 "Caterpillar" tractor moved across the desert of northern Imperial County, Calif., scraping the face of the desert clean of boulders and brush in order that automobiles may eventually speed smoothly by. Under direction of Supervisor B. M. Graham, a construction crew last month used a "Caterpillar" to forge the last link in the International Four States Highway between Niland and Blythe.

Where temperatures daily ran over 120 degrees F., where water was scarce and supplies many miles distant, where the terrain was rough and the job diffi-

cult, "Caterpillar" demonstrated its reliability and stamina. Under the most trying conditions "Caterpillar" performed faithfully and economically.

In highway construction, in clearing desert land and carving out irrigation projects, or in any of the many farm power jobs it is called to do, "Caterpillar" always demonstrates its superiority.

"Caterpillar" has taken a major part in the physical development of the desert southwest. As man pushes his civilization further and further into the desert areas, "Caterpillar" remains in the vanguard of the march of progress.

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